

AAACTTATAAGTTTAACTCAGTGTAATAATGTCGCCGTCTGGGTAAGAGAGTGGTAATC
TATGTAATTAACCTAAATTCATTATACACTTATGGAATTTCTGTGTACAGCAAAATAT
ATAGACATAATCCATTTT

- 5 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 119>:

gnm₁₁₉

TTGTCCAACATCTACTATACTTATGTGAAAAATACATACATATGCCCAAAATTGTGTATC
AAACCAAAATGTTCTGGAAATAGCCCATTTGGACATCTATTTATAAAATTGCATACACTTT
AGCTAAAAAAGTACTTCAGTTTGTGTTAGAATATTCARATTCAGAATTATTTTGA
10 AAGAATTGTGTGCAGATATCAAGAAATTTGAAATAATTGAGAAATGTGTACACAATA
TCAAAAAATCCATTTCGAAAAATGCTTTGTACACTTGTGTTTGGCTTGTATTTTATTTT
AAAAGTATGATATGTAAAAATAATAGGAAGTGTAGGATTATTTCTTTTCTTGTCTAATAA
AAAATAAAAAATATCATATGCATTTATGAAGATAATTAACTTTTAAATACTTTTAAAT
ATTTTCATACATATTATCCATTTCTCATTCCAAAAAAGAGTTTAAATCTCAGTTTCAGAA
15 TAAAAATGGGGCTTATACAGATTTAGTTGGGCCATTAAATGTACAGGTGACAATTAATCCA
CCAACCTGTTTCTCCTGACACAAAAAATATCTCATCATGTCTTCTTCTCGTATTTCTGT
CTCTCATTTCTTTTTTGACCTCTCTTTCCAAAAAGGATTAGATCTGACTCACTATTACG
TGTCACGCACAGTTCATTAGGTACGCTCGGAAAAATTTATCCACACATCTAAATATCTGA
TTTATGATCAATCACCCATTTTATTTTCTTTTGTAGCTTCTCAAATCTTTTGTCTCT
20 TAATCGATTTAAAA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 120>:

GNMCG24R gnm₁₂₀

CAGTCAGGTTACTAATAAATCTTATTATCCCTTCTTTGTATATTACTAATAGACAAA
25 AACATTTTCAGATACTCAGTGCAGATGTAGAGCTTAAGAAGAGCTAAAGCACATTGTCTAT
GGCGGCTACAAGGTGAGTCTAAAAACAAGTGTTCTCTTTAATGATTCTTCCCAAAATGA
TTGTTTGTTCCTTGGTTAATATATAGGGAACAGAGGTTGAGAGGGTGACTAAAAATCTA
AAAGTGGCAAGAGTGTTTAAACACATTGGTAGAGGAATGAAAGCAATGGGGATCGCATCT
GTTGATGACTCAGAGTGTACAGAAGTTATGGCTCCAGTTGCACACAAAGGACCGAAGCCCG
30 GTTCTACTTCTTATGGGAGGTGGTATGGGTGCAGAAAAGGACATGTCCTTTAAGACATT
CTCAAAGAGTAAGTAAAGTATCAACATATCTGTCTAATCAGTGTTCTTATGCATTGAA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 121>:

GNMCG25R gnm₁₂₁

ATATAAGAGTTAATCTTATAAATAGTTTTCTGAACTTAATATACTATAACAAATGTA
35 ATCTGCGCTTGTATTGTAAGTGAAATTAAGCAATGTTATGATATTTTACTAATTA
CTCAATATGAATAACAAAAATCCTTAACTAAACAGAAACATAAAGACGACTTAGTT
TTTCTCTTAGATCTAGACTCAATACTAAAAACAATTTCAATATAAATCTTTGTAGATC
TTACAATTTTAAAAATAATGTACATTAATGTTGAAAGCAAAATCTTAAATTAGTGAT
40 ACTACTACTTTTTTTTATCACCGGTATAGATCATTAGATCCTTAACTCAATCCCTAGA
GCCTGCTTATGCTTTAAGCATTTGCAATCACTACCAACACACTCAAACTCAATATA
ATATAATTTAATCTATCAATAAATAAATAC

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 122>:

gnm₁₂₂

CCTCGAATTGTTTTATTTTTTTCATTATCAGACCAGACACAGTTGGGATAAAATGAAG
 GGGCTTGAGGAGTGAGGACGGAGAACACACGTTCCACACAGTTGTGATAATTTTTTTA
 TTTCAACAATAAAATTGCAAGAGACGAGTTTGGTAAGTAAATCCGGTTGAACCGGTCCGAC
 5 CGGTATTGACCGAAACATACAATCTTTTATAGTCTTCACACATGTTCCCAACTTTAAAC
 TTAGAACCCTTAGATGTTGTATTCAATAATTGTCAAACCAAGTACTGACAGATACAGA
 TTTAAAACTATTTTGTGTTTATCAATTTAACTAGATCTGTTTACCTGAAACCAAGT
 CTCTACAGAGTTCTCCATAAAATCTTGAGACAAGTTCATTAAGACAGGACTCTTAAGAT
 10 TCTTCCAACAGAGAAGAAAGTTCTCTATGTCCATTAAGTCATCTATTTCCCTCTCTCAA
 CAATCAGATGAATCAGATAGTTTTCAAAGCTTCTCAAGCATCTTCCACAGCATTGTCTT
 CAAATGTATCTCTTGGTTCAGCGATTTCCTGGTCCGTGAAGAGTAAGGTGTCGTGATGG
 GTGAAGTGAAGAGCTTCTTGGCTGTTGCTGGCGTGAAGAGTGATTCATAAACTTGGAGT
 AATCATCATCGTTCACACTAACTGCAATGGCAAAATGAAGAAACAAGAGATCAAGAAGC
 TGATAAAATTTCAATGTTAAAAACAGATTTTGTAGCGAAGTTGTCTTACAAGAGCAACTTC
 15 TAGTTTTGGCGTTGCTCATCTTAAGTTCTTGTCTGAATTGAGGAAACAGAGACAAGAAC
 AG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 123>:

gnm₁₂₃

CCAGTGATCTTATTTTCATTATGGTAAAAGTTGGAACCTCTCACGTGCCGATCAACGTCTC
 ATTTTCGCGCAAAAAGTTGGCCAGGGCTTCCCGGTATCAACAGGGACACCAGGATTTATTT
 ATTTCTGCGAAGTGATCTTCCGTACAGGTATTTATTGCGGATAAGTCTATGGAGCGGGCT
 AACCGTGCACAGGAAGGACAGAGAAAGCGCGGATCTGGGAAGTGACCGGACAGAAACGGTC
 20 AGGACCTGGATTGGGGAGCGCGTTGCCGCCGTGCTGCTGACGGTGTGACGTCTCTGTT
 CCGGTACACACACATACGTTCCGCCATTCCATGCGATGCATGCTGTATGCCGGGTATA
 25 CCGCTGAAAGTTCTGCAAGCCGTGATGGGACATAAGTCCATCAGTTCAACGGAAGCTTAC
 ACGAAGGTTTTTGGCGTGGATGTGGCTGCCCGGCACCGGGTGCAGTTTGGCATGCCGAG
 TCTGATGCGGTTGCCGATGCTGAAACAAATATCCTGAGAATAAATGCCTTGGCCTTTATAT
 30 GGAAATGTGGAAGTCTGATGGATATGCTGTTTTTGTCTGTCAACACAGAGAAGCTGGCTGTT
 ATCCACTGAGAAGCGAACGALACAGTCGGGAAAATCTCCCATTTATCGTAGAGATCCGCAT
 TATTAATCTCAGGAGCCTGTGTAGCGCTTTATAGGAAGTAGTGTTCTGTGATGATGCTGCTG
 AAGCGGTAAACGAAAACGATTGAAATATGCCCTTCAGGAACAATAGAAATCTTCGTGGCGGTG
 TTACGTTGAAGTGGAGCGAATTATGTGAGCAATGGACAGAACCACTAATGAACACAGAA
 CCATGATGTGGTCTGTCCTTTTACAGCCAGTAGTGCTGCCGCAATGTCAGGACAGAGGCG
 35 AACTCGAGTgAGCGGAAGACACAGGGAACAGCACTTATATATCTGCTTACACACGA
 TGCTGAAAAAATCTCCCTTGGGGTaTCCACTTATCCAGC

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 124>:

GNMCG27R gnm₁₂₄

CAGTAGAGGCCATACCAATTATCGGCCTTGCTATAATGGATTGGTGAAGGAGTCCGAT
 AATCTAACTTGATCTATAATAATTCAAACCTTGGCAGCGAGCCAACTTGCACTGAACCTCA
 AACATTATGCTATTCATCTTTACTTAACTTTTGATCTGAGAAATGTTTGTGTTTATG
 TAAGTTGGTCGCTTTATTACAAAAGATTTGTTCTTACTTGATAGTTACTATCTATTGA
 AATGAACCAAGTTCCTATATCACTTTTATGCAAGTTGTAGGAAATGCATTTATGAGAAAA
 45 TCACAGAGGATGAGATAGAGAGCTGTCCAGTATGCGATATTGACCTCGGGGGGTACCCAA
 CTGGAGAAACTAAGTAAGTTCTTCTTCTTTTATTCCTTACACAATTTTCTCTCGGT
 CTTGGTTTAGCAGTGATTCTTGTATAGACTGTTAGAAGCCTTTTGG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 125>:

gnm_125

```

TAATTGGAAACGCGGCCAAGAAAGTGAACACGCTTTCTCTACACGCTCTTTAACTCCACAG
5 CTACTTATGACTCAGCTGCTTATTTTAATCTCCTCAAAGTCTTTCCTTTTTTACAACTT
TTTCCCAAGACTCAATATTTGGTATGATATGGAAGAGAGCATTAATGGCGTATCTTC
AACGCCAAGATTTTGCATGTGGCTCTATCGTGATTTCGAGTTTGTATCCATCTCTCTAGG
TATAGAAGAGAAAAGAGATCAACCAACCTTTAACCAAATTTATGACGTAACATATATCAC
10 TATCAAGCCAAAGTCAATGATGAAGAAAACATAGACTGATGATGTGAAGAAAAAAGG
TAGATAACTTGTGGGATCTTGTATGTTAAGTTTAGAGAAACAAAGTTGAGTCACCTCTCTCT
CTTTCTGTATTCATCAATCTACAACGAGTAAATTAGCAACAACAAAAGGACAGAAC
AAAACAAAGATCAGAGGGTCTTTGTGTATCAATAGCTCTCATTTGTTTCATTTCGGAAAAG
ATTTCGAACATCGCACGCTGGTTTGAACCATTTATCACATCACTCTGCTTCACACTCTCG
CAGCGCAATACCAATTTGGTATATGAACCTTAAATCCCAACCAATCAACACTCAGTTTCCCT
15 CTCGAAGACACATCAACCAAAGCTTCAAGCGTCTTCTCTTTGTTGTGACGAATGTAGCA
TCAACATCATACACTTTGGATTTTCTGAGTCTTTGTGAGGATCTTCAAGGAGGTAAACATT
CCCGGGTCTCGTCTTGAATCCAGAAGTGCTCTCTTCCGAGGTTATGTCTCAGAAAGT
ATATCAGCTTTCATAGGACTGTAATATAGCACCGTCTTGTCTATTATTATAGAGAGCTGA
AGCACCGTGTTTCAAGTTCGCATTCATCAGAAGATCTGTCGATGATTGGCGATATCCAAT
20 CTCGAGAACTTGAGGTTTGTGACAGCACCTGAGGTAGTATAGATTTTGATTGAAGAGTTT
CGACGCAATCCTACCAACAGAGCGATTATAAGGACACAGAAACAACATTCGAGGTGCA
GGCAGCATATTTCTGAAACATCCGAGGGCGCATATTTCTCTGTCTCTGACCGGATATGA
TCCACAAAGGAACCCGATTTTCTACTCCGATCGGCCICTTTCTCTCTCGAAAGCCAGAC
AGTCTCGACGCGAAGGAGGCGGCTTAAAGACGAAGCGCTTTTCGGGTTTTCAACATCA
25 TCAACCTGTTTCGAGAAATGGAAGGGCTTGAGAACTTGAAGTCTGAACTCAGATCAAAAGAACCT
TTGCCATAGCTACTATCTTCCG

```

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 126>:

gnm_126

```

TATTTTCCCCCATAATTTAATTCATGAAACTGACTTGGATAGTCGGAACCACTAGATTA
30 GATTGCGCATCATACAGTACAACTCGATTATAAACTGAAATAGAAATTCAACTATAAAA
TTCAAAGCAGTAAATGAAGTCTCTCTTTTTCACCTATTGTGTTTCCATATAAATCCACA
AATGACATTTTAACTGGTAGTGAGGATAATAGGATATGATGATTCTCAAATTCGAAAT
ATTTGTATATTGGTTGTAAAAACATTCGGATAGTGCACAAACATATAAATCAGCATAAAC
35 CTTGGAAAAAATTTACGTTTGAATCTAGACTAATACATCCAATGCCATGATTATTGA
ACTACATGCATTAATGCATACTAAATATGATCAAGTATACATAAATCTCGGAGTTTGATA
TGATTAAAGCGmAKsTTAATGTTTCGGCCATGTGAAACCTCGTCTTAGAATAGTTGTGCATC
ACGCGATGTTTGGCTAACGTAAACGAATCATCAATCTCGTACCACACATGTTGCACATGA
GAAACAAACAGCCGCAATATTTCTTGATTCACCTTCTTCTTTCTCTTTTAAACCAAAAAC
40 ATAAGCTGCAATATTTCTAATTCACACTCGGGACCAAAACATGTTAAAGAGTTATTGTTT
TGTCTATGGTATTCAAACCTCGTGATCTTGAAGATTTTTTTTCTCTGGTCACAAACATCA
TAATCAIGTTATTTTCTAATATTTATGTATACTTAGAATAAATAATATAGTTAGGATAT
TTTTTAAGTAATTAATTAACATGCAAGGATTTTGTAGGACGGCATGTAAAGAAACAGAAAT
CAACTGATAGAAACTGCAATAATGCCTGATACACACACACAGCTGTAATTTGGGGCTCAGC
45 TTCCACGCTTGCAATAGACATTTTTTTGTTTATCTTATTCATAAAATATATAATTAACAAT
ACTAATATCATGGCATCTCATTACCCTCATATAATTAAGTATAAAAAAACAATAAAGT
ATACCACATTTCTAAAAGAAAAGTACGCATATGAACCTTTATTAACCTCAATATCGAGTAT
TCAGAGTAAAAAATATGTCATATAAGCCATATAGGCTTTTGTGAAAATCAACGGCATGT
50 GTTAATGTTACAGGAATGAATTTGGAATCTTTAAAGGGAACAAAAACAAAAATGAAC
TCACATATGCAAAAAACCATGTCTACCTAAATTTGGTCAACAAATGTTTTACGTGATTAT

```

5 ATTTGCCCTTCATGAAGTATAGACCAACAAGAACGCTCTCAAATAGTAAAGACAGAACGTGG
 GTAAAGTGACAAACACGGTTCATGTAAAAGGTAGGTACAAACGCTATATCGACARACCAGA
 TATGGTGGTGTATATATCTGTGTAACTAGTGGTGATGCTCAATGAAGATATAACCA
 AAAATAACCATTTTTCCTTATGCTTAAAGAAACATATCAGATTGGTGTAATCTGAACCT
 AAGAACCCAAAGATATGGATATGAATTTCTTACCTAAGTTTTTAAAGAGTCAAGAAAGCAAT
 GCCTTGTAAACCAACAGAGCTGAAGTGTGCGTCTTTCCAGCATATCATTTTGTGGGAAC
 GGGTCTCTACTTTGTCTTTTCTCCTGATTCGTCTCAAGATTCATATGTTAGCTTTTGTGA
 ATAATTCTAGGTAAATAACAAATATCTTAGCAACAGAAATTAATTTACCTCTGTTTCT
 10 TTGGTGACAGAGCTTCCATGACCTCCTTGTGGGGTTACATCTAACACACTTAAGAAAT
 TTTATGTGTCAGTGTACATATTTGTAAGAGATGTTAGTGAAGAACACAAAGAAAGTGTGTG
 ACAATGTTCAACCTACATACATCTATTTTCGCTGAGAGGCTCTTTGCAATGGATGATGAGG
 TCTCATCTCCCTGG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 127>:

15 **gnm_127**
 CCCTGCCCTTGGCAAACTTGGATAATCGATATCTCTTTTAAAGATGTGATCTTCGAGT
 TGTGTAATCTGAAATACAGAAAAACCAAGGAATTAGCAAAATAATAGGCAAAACCCCACT
 AATTCACACAAATATGTAGATAAATCACAAATATTTCTCAAATTCAAACACCAACACAA
 GAGGAAACTAAGAGATACTGAAAGAAAGTGAACATAAACTTAAAGAGATGATGTTAGAAC
 20 TTCCAAAGAAATGATATGAACACTGAGTCAATGAACCTCCAAAAGACATACGCTTAGAC
 TATAATATTTTATGAATACAACTAACAGGTCAATGAAAATCTTGTATAAAAGCATATA
 TATGCGGTAGCTGTTATTTCTCAATTTAGTTAGATAAACCCACCTCTAATGTTGGACC
 TCCAGSTCGTTCCAGGTAATCCCTAAACGCAGAGAGCTTTTAATGTCAAAAGGCACAG
 TATCAACATCATAAAGTGACGAAATAGAGAGTTTGAAGACTACCTCTCTTTTTCCTAT
 25 GGTGTTCTGTAGAAGAGCGACTCTCAGTGCATCATTTGCAATATTTACAGGAATCAGGGT
 TCAAACTCTCCTTTTGGCATGGCTGTTTCGSCCTCCAGTAAAAACATCTCTCCCGTCAT
 CAGAAGGCGGGCTTAGCTGTTTAAAGGAAGGACAAGAAATCAAATTCATACATCTTTTT
 ACTTGATCTCGTGAGGAAGAAAGAAACAGGTGCACATATCTTATATCAGAAAAGATCC
 CTATAGTTCTATATCACCCACATGAAATTTGTGTAATATTCATAAGAAGTGACATGCTAC
 30 TTTGATCAAGTCATGTTTCCATAAATTTCAGAAGGTAGTGGGTTGCATAGATGTTGATT
 TGTGAATGAAAAGAAAAATAAACTTTTGCATAAGACATTACCATTCCATTCTCGTCAGA
 GAACCTGCTGTTGTGAAATCTGCAACGTCACAGAAGTAATTTCTAGAGTCGCTATATTG
 TTTGTGCAAGTGATCACTGAAAGTTTGCACTTTTTCCTCTCTGCCCCATCTTTAGCATG
 35 TATGCCAATTTGGAGACCTATAAAGGCTGTCACTTTTGAACATTTTGTACTTTGAATCAT
 TGTGTCTGTGAAGAGGAGATGAAAATATCCGCTCAGGAAAAAGAGTTAGAAATGAATG
 GAAGACAGCTAAAAGATAAGATGACGAGACTTTGTTACCACTTCGTTCTCAAAGTCGTTG
 AGCCTTCCCCTGACATGTGATGTATCTGGTTGACCAGTATCCTTCCATGGAGAGGAGCAC
 CGGTACACAAAAGTTCTTTTCACTACACAAGTTAAATAAATCACTGATCTATATCTTAAG
 40 TGGTACATATTACTGCTAATGTAAAGAGAAAACAGTATAAATAAATAAAGGAAAAACAAA
 CAAAATGCAAAACAAGTCCCAAGAAAAAAAATACTCGTGAATGCTAATCAAC

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 128>:

GNMCG29F gnm_128

45 CCATACATCCAGTTCACACAAAACCTGAGTGGAAAAACACAGAAACCTGACCGGAAGAAA
 GTGCTGAGGATGGTGAAGAGATTGTTATCAGACCACCTAGGGATTAAAGACAACACCAC
 GCGCAAGAAGAGGAGAAGTCAAGGAGAGGACCGTGGACGTCAAAAGCGGGTTGTTCCGAT
 GTAGCCGGTGTAACTCAGGCTGGCCATTTAGAAACCACTTGCACAGCTCTATATGAAAAA
 CATATGACATCTCTCTTTAGATGTTTTACTTCTCTCTGATCTGAATTTATTATTCTTTA
 TACTTTAGGTTTAGAATATTATTTTCAAAGCCCTTCTCTG

5 T T G C A T A A A A T A A T T A G T C A A T T G G C G A A A A G C A G G T C T T C C G C C G T C T T G C A C C T T A
T T G A C C T C A C C A C T A C T A C T T G A A A T T T A C T C T A T A A A T A C C G C T C C T C A C C
T C T C A C T T T T A A A C A A A C T A A G T T T C T T A A A G A T C A C T A A A G A C T T A A A G T T T C
A A A G A T G A A G A A A A A G T T A G C G T T G G A G C A G G A G A A A G T G C T G T G G A G C A G G A G
G A A T A A G C G C G G T G G A G A C G A G G G A A A A T G G T T G T G T G G A G C A G G A A A A G T G C T G T G
T G T G T G G A G C A G G A A A A A T G G T G T G T G T T G A A G C A G G A G C A G G A G G G A A C G A G G A
10 A G A G T G T G C G C G T A G T G G A G A A A G T G C C T A C T G G T A G C C C G G G A A C C A A G C A T C T
T C A C C A T T C A A G A G A T A A G T T T G A G A T G A T A C T A A A G G T T A C T T G A T A A T C C C A T T
T T A A A A G T A A G T T G G T C T T A T G A T C A T C T A T G G A A G T T G A G T A A G G T A A G T T T A C
T A C C A A A T A T A T T A T G A T A A T G A A T A A A A T G A T A A T T G C C T T A T T G T C T A C C C A C
T T T A C T A A T T T G T G A T T C A A A G A C T A A A A A C T A A A A C T T T G T A T A A T C A G T A T G A A
15 A T G A A A T G A A A G T A A T T A T T A T C A A T T T G G T C T C A C T A C C A C C A T T A T G A T G G G C T T T
G A T A C A C T C A T T C A A T T G T T G T T G

GNMCG30F gnm_130

[illegible]

30 gum 131

35 TATGAGACCAAAGCTTTTGTGGCGTTATCACAAAGGACAAGACATAAECTTTGGGGAC
 AAACCTGCAAAATAACATGAAAGCAAAACCTTTTAAACATCTGATCATCAACAAAGGTGA
 ACAAGTGGTAGTAAAGATGCTCAACATGGTCTCATCTTCAATGACATCTGGTTCTTAAG
 ACAAAATCTTCTTCTGCAACATGCTATTCCAAAGAGGCTTCCATCAAGCACTGCATG
 40 GTACATCATCTACAGCTAGACAAAATTTTGAATAAAAACAAGAAAGGGGTAGGTCT
 CATTTCTGAAAAAAAGACTTGTAGTCGGAAGAGCTCTCAACAAATATACCGACGCA
 GGTGAAAAAAGACTCAATGGGTGAAAAGATCAATCAACAGTGGAATGGGATTAAGG
 GCTTACTTCAACCCAGTCACTTCTACTTGCACATCTCTTTTTATGAATACATCATTGGA
 45 ACTGTAGCCATATTCGGATATCTTCGGAATTCAGAAAGGGGAATATCATCAATTTCTTA
 GTTTACAAAGTGTGATCATCTGAATACAGCAAGCAATGACTGTGATCTACAGCAAAA
 TGGAGAGCCCTCTCAGATTTACTATATCTGAAACCTCTGCCTCTGAAAGATATGTAGA
 CTGCAACACCAAGGACCAACACGGTCACTTTAGTCAATAGAGACATAAACACGCT
 CATTTCAAAACCTCATCAAGCAACTAAACAAAGCTCAAGGTGAATCTAGCAATCACTT
 ATAGAAAACCTTCCATCTCAATCACATAAGAGTCTCATCAACTCTCCATCCTAAAC
 CATGCAAGAACTAATTCAGAACCGGTGAGAAAAGTCACCATCCATCATCAGTATGTT
 TTATGATTAACATTTATACATGACAGCATCAGAAATCTACCTCTCTCGGCATATACGCGA
 TCCGCTTGGTCCAAAGTAGGGTACATGAGCTTGAAGGAATGCACTTTGGCTCCGCAAGA

GCTGATCTAAAAAGGATAGAAACAGTAACCGCGTGAAAGCAGCCTTAGCATCCTCAGAA
 CAAACACTCAAAGCTTATTAAACCATCCACTTCCTCCATTCCCTCGATTCCCTTATCATCA
 TCATCATCACAAACTGTTCTCTCTTATCCAGTCAATCAATCACCGGTGGATTCTTAATC
 CATTTCGACCCCTTGAGAAACCGGAATAATAGAAAGAGCCCTTGAAAGATGAAACCCCCAGA
 ACATTCTGCTCGTTGACGACTCATGACCCGCTGTTGACTTCAATATCGAGATCAAACCCATC
 ACAGCGGGGCTTTGACTTCCCTTCCGATGAGTCCCTCGCGATGCTACCATCATCGAT
 CGAGGTGATTCGAGGAGATCTATCGAAATCAAGCTTGTGGGAGAGAATCTAGGACG
 AACCAAGGATCAAAGCAGTAACCCCGGACCAAC

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 132>:

gnm_132

CAGCCATTAATGTTAACATTCTTTAIGTACATTTCTGATCTTTGGTGTGTGTTTCTC
 TCATCTATAGGTGCGACTTCAACTGGAAACACTGTTAGCTGAGAAAGCAGCGTTGGCTCA
 TGAAACCTCGATATACACCCGCGAAAACCTCTATCTGAGAGGAGTCTCGAATATCACCA
 15 GCTTAACAATGCAAGATGTGGTCTACTTGATGAGAAGACTGAGAAGTAACGGAGGTATA
 TCCCATTAATGTGTCTTCAATGTCTTCTTCATCAGATAACTCTTACZATCAAATCCAAAG
 TTTCTTGAGCTCAAATGAAACACCACAACTATCAGTTTCTGCTGTTCTTGTGTGA
 ATCAGACAAGAAGACAATCGTTGCCCTGTAATTGCTCTGATTTGTAGAAATATATATAC
 TCTGTACTCTTTATWTGGGGTGGGCTCTAAGAATTAGCAATGAATGATATTTATACCT
 20 TCAATTACTTAAATAAAGAGAATGTTCTATTATTTCCCTGAAACAGTACCATGARAGC
 TAAAGTTGAAGTGGTGAGTAGAAATTAGTCAATTATTAAATGGATATTACCTGAAATTAAC
 AGAACAAACAATATATATATAAGCTACATTAC

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 133>:

GNMCG36R gnm_133

AAGCCTTTTGGCTCTTACTGTTGATGAAACGAATTTCTTACATAATGCTGAAAGTTGT
 ACATGATTATGCTGAGGTGTGCCACATATGGAAGGTTCTCCGTAATTTTGTGGCATAAG
 TGTGAAGTTAATCAAGAAAAGTCATTTCGATTGAGAAGCAGTTATGACCTGAATATGTTG
 GCTAGTTTAATACTTTCGCTGACACCAACAATTTTGTAGAACCTGAAACAAATCTCT
 30 TTAGTACTACACTCTCTCTTACTAGTTGGTCACCAGTAAGAGCTTTGTTGGTGGCGAAT
 TATTCAATTTCTAAAGAACCACTCTTATGTATTATTATTAGGCCTGACCACATTTTGCA
 GACTTGAGAGCCAAATTATTCTCTATAAACGTAATAAGAGAGAGCGCCTGAAGTTGTG
 TCCTCCATCTCATTACCTGCAAGAGGAGGAGAGGTTCTATCTCGTCTTGTGGTGAAGC
 ACACCCAGGGTTTCAGCACAGCTGGTACAACAGGAAAAAGACAAAGCTGCTACGAGA
 35 AAGATGTAAGAGGTAGTGGTTCTTCACTAGAG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 134>:

GNMCG36F gnm_134

CCATTATTGTTTTCTACTTGTAACTGTTTTAGAAATATATTGATTGTAAGGAAAAAT
 GTTTTTAGATATTATTTTTTAATTACAAAATTAGTAAACCTCAGTATAAATTAATAAT
 TATTAATAATTATCGATAAATTAATATATTATGAATATATAGAAATTTTCGTTCTTAATA
 TTATTAATTTGTAGAGGTTTTATCGTAATTGTTTTGGTAAAAATGATTAACCTCTTAAT
 TAATCTCCTTATACCATTTACAACTTCTACTTCATGCAGTTTTCAACAACTGTCATATTT
 40 GTGTTTAAACAATATTATAAGAAACCACTTTAAAAAATTAACCACTAGGCATTTGGT
 45 TGAAAACAATTACAAAAA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 135>:

gnm_135

```

TACATCAACTCCGAGACTTTTGCATTGCTACTTGGAGCTCTACGGTACTTCCGGTTG
5 AAGCGCTCTGCAATGAATGACCTTTTGACTGTTCTCTACTACACAGCTTTTGACGTTTAT
CTCGTTTACCTTTTGTTCTTGIACTACAGTGATCTTTGAACCTGAAAGTGTTCCTCAATA
TATGTTAAACTTGATTCCAGTTAGATIGTTTTGGTTTTTATACAAGAGATTTGGCCCTATG
GCTGTGGAGTAATGAGTTATACCTTTGTTTTTATGACTCGGTTTAAGAATCTCTTGCATA
AAACTGAGCAsAAGCAsACTCTTTTTGACAAAAAAGATATCACACAGAGTAAAAATCAAG
10 ACCTAGACGAAAAAGCGAAAAATGACAAAAAGCCACAAGAGTTGTGGTAAGCAAAATGTTTG
GGAACCGCTCGAATCTTTTAAAGCATTGGACATCCATGAGTCCGGCCGCAAAATGATGTG
TAGAAGGGTATGTCAATCTTTGGAGCAGAATCCGAATGTGCGAAGTGGAAACCATATCTCT
CTACGAAATGAGATAAAACACGAATGCTGCAGCGATAAAATGGACTTCGTTTGTGTTCTG
GATTATATTTGAACAGCCTCTTTTCACTGTCATGGAAGAAAAGATTCCTTGTCTAGAAA
15 CTGCACTGGTCTACACCACAACCTCCATATCCAAGGGTGAAGAGCTCTAGGGAATAAA
CAAATGAGTACGCTCTTGGTCCATGTATCTCCGGATA

```

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 136>:

GNMCG37F gnm_136

```

CCTAGAAAAATTTTCCTTATAGAGATATATACAGCAGTACAAAATAACTTTCTAAATTA
CTCTCTTTATCACATATATAACTGAAAATGTAAACAAAATACAACTGGATCCAACTCAT
20 ATATACGCTCAAAATGTTTTTCCAATTCAAAATCTAACCCAACACAAATTAAGAACGCTAAAT
TGATCTATAGCTAAATGTCAATTACACAAAGTAAAGAAACCGCTTTGTAAAGTTATAATC
AATCTGACCATAGTCTAATTTATTTTCGTACAAAATATTTCTAAACGATGATACCTCTTAA
25 ATGTTAAAAATCAATCATATATTTATACCCAAACAAAGCGGCTAAGTAAGATAGGAACCT
TTAACACAAACATAAATAGC

```

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 137>:

gnm_137

```

TGTGTGCTCGCATTACGACATAAAAATGTAATTTGAGTTTTATTTCATTTCTTTGACAAA
AAAAAAGTTTATTTTCATTTATTTACCCTTTTTATAGATATAAATATGTAA
ATCAAACTTTTATATCGTACAAATTTAAGTATATATTTTGTGTTTTATATGTCAAGTCCA
TTCATTAAITTTAAATTTGATACACAAAAGAAATAATGTAGAAAAGTCAAGTATACAAATGA
TGGATGAATGGATTACATAATGCTTTTTTGGTACGTAAACGTTAGTATTTGTCTAACAAA
35 GTATTAGTTGCGTTATTTTTTTCAGAACAAATCAATCCTAATTTTAAATATTTTTTATTA
AACACTATGATACATATTAATTTACATTATAATTTGTTATGAAAAATAAAACGGAGCNA
TTTTGTATAGGTTTTTTTTTTTGTCAACCACACAAAAATGGTTACAAAATTACATGTAA
CTTTAAAAATGGTATACAACTACACTAACCAACCATAGGTCACAGAAACCCACTTGTCT
ATTTTTCTAGATCCAAATTTACAAATTTAAACCACACAAATTTCTAGAGGAATCAA
40 TTTTGGGAATGCCATTTAATAAACTTTAACTGTTATTTTAAATATATTGAATTAATA
CGAATCTTGATGCTTTGTGATGTTTAGACGAACAACTAATTTGTCAAGTTAGCTAGGTG
ATCAAGATAGAAAAAAGTTTCGTGTAATCATATTTTGGTTCATGAAAAATTTGGTGTAGTTT
ATGGTTATGAGGTTATCTCATATCTATGTATAAAATAGAATGTAGAATTTTGTCTGACA
TACTTGGTTTAAAACTTAAAAATATGATACATATATCACCTATTTCTTTTAATCTTAAC
45 TTATAATCCAAAACATGAAGATCATTTAGGCCCAATTGATTTGAATATTTGTTGCTTATGT
TCACCTCAGAAGTCAGAAACCATACCATATCACATGTCCTTTTGTGAAACCTAAGAACCA
CTGTGGTAGGGGAGGAATTTGCAACAGTGGTCCTCTCTCTCTCAGAGTTCATCTTCCC

```

-643-

TTCTTCACAGAAAAAACCCTTAAGGATTAATCTCATCTGTTCTTTCTTCTT
 TAATCACATCTCAGTTTATGTGTCAGTGGTCTCTCTACCTTCAAGGATTATCCAAT
 GTTCTTCATGCATATATAAACC

- 5 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 138>:

gnm_138

ACTAGATACCTCGAATAGTTCCTGTGGAATCAAACCAGAAATTAGTAGACACATAATCTTA
 CCAATGTGAAACAAGGGTGCTAATAAGGGCCTTGTTACAGATCAGATCGAAACAGAGG
 ACACAAACGGATAAACTCAAAGCGCCGATTGTTCCAAGCTGGAACTCTGGGCATCGCTCA
 10 TATTTGCTCGCTTCTTCTATCAGATCTACGATGATCTAATAAAACCAAACTACAGTA
 TGGAGGAATCAAACCTACATCAGATGCTTAGCCAATCAAACCAAAAGTAACCTGAAGAG
 CRAACGCGAAGAAGAAAAAGAACTCATTACGAAATGCGAGAGAAATTCAAAGCAGGA
 GAAGCTGAACCTGCACCAATGGAAGATAATAACAACAGCTCAAATTCAGAGCAGACAAAG
 ATAGTGTAAAGTCGAAGAATCTTGAAGCAATAAACCTAGATCTATCGATGAGATAAAA
 15 AATAGTTTAAACGGAGATTACGAGAGAAGAAAGGAGAGAAAATGGAGAGAGAGACCTTGAG
 AGAATCAGACAAGTTCTAATGGAGGAGAGAGAATCTGTGAATTTGGAAGAGAGAGCCTA
 TTTTGTAAATTCAGAGAGATTCACCATACGTCAAAATTGGSCCTATATGTAATTAATA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 139>:

gnm_139

CCATCTCTCAAACTCTTCAACGAGCTTAATGAAGAGAGAAATCAGCACCAGGCTCTTCAGA
 GAAGAAGCTGTATATGTCCTCTCACAGCTGCCTGATTTTCTTATGTACTCATTAGCTAA
 TTTGCAGAGATGAGGACATTCTCTCCTGTCCTTGAATCCCATCTGCCGCACTACAAAGA
 CACAAACAACATTTCTTAATATGCATCATAATCTAAGATCAGGAAGATTCAAGGAAGC
 25 TATGTAGATTGATTTTACCAACATAGTGAGAGAAATCTCTCAAGCTTCTCATGGCCTTTGT
 GTTTTGGAGACGATCTGAGACGAGGGATGTTCTTGGAGTGACGTAGCTTCCTTAGACGGA
 ACTGCACTGCAAGGGCTAAGAGTAAGCCAAATGGATGAGATTACTAAAATCTGTGCGAAGG
 TCGTCGTGTGTTGTTGCTGTTAAACTCTGGAACACACATTTGATCTGGATTGCTTTGGG
 GATCATCAAGAGACATGAGATTAGATTGTTAGAACTCTAAGATTGGGTCCATCTTGAG
 30 TTTGTTTTCTGTACGAGACAAATGTATCTGCTTTCTCCAGCTGTGTTGTACTAAATAGC
 TTTGAGCTTATTACTCCGGAAGTTTCTTAGTTTGCTTTTTGTGTGATTGACTCACCATT
 TTTGTTTTAATAACCAAACTCTCATCCCAATGATGATATAAATAGTGTTTTGGCAATGG
 TTTTATAAAATCTATTCTGTTAAGGCTATAACATACAGAATCTGTCT

- 35 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 140>:

GNMCG42F gnm_140

CCTGCAAGCAGAGAGCTCTAGAGGATTGATTACGTATCTACAAGTAAGAAATAGAAGTT
 ACCGGCGACATTGATGTTCTCGACGATGAAGAACAATGTGCTCGTTGATTTCTCCCTT
 CTGCTCAGCTTCAAGGATGTGATCAATGGCACATTTCAATCCTTCACTACCTGTAGGCTT
 40 AGAAGTCCGAATTTGCTGTGAAGAATGAATCATCAATGTCAATTTCCCAAAATCAAATC
 AAAAGATAAAACTAAAAATAGAAACAAAAAATGAACCTCACTTCTCTCAACAAAGT
 ACTTCTTGAAGAGAGCGATTCTTCGATCTTTACATCTTGACAAATCTTCAATAGGCTC
 TGAGGAATGGTCTAAGGATAGGAATGAATCTCCATAGTTATACTCAAGCTCTGAGCTA
 ATCGACTTCTCTCACCATTCAAAGCCTTAAGCC

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 141>:

gnm_141

```

5  CTCTCTGTTTATATGAGGTATCCACTCGGTCTAATATGGAACACATAGACCGTAGTTCT
   ATACATTTGGTTCAGTCTTGTTGCTTATCAATATGACTGTAAGGTCCCCATAAATGTTTAA
   ACTAAAGTTAACTCTCCCTTTTATTTCCGACTTGTGACCGGTGATATCTTATGACTCTG
   GGACTTTTTTCGACCCACCGGTGTTGAACCTTAACTACTCTATGTTTTTTTTTTGTGAAACA
   GGTAGAGATAACATGATGGGAGAACCACTGATCCCACGCTTGACAGCTTCACAGCTTAGT
10  AGACCTATGGTTGGAAACAACCTTCTAAGCATCAAGAGTCGCTGCGTCAATAGGTTTCATC
   TGCARAGGAATTTGTAATGTTGCTAGTTTATCTCGGAAGCTCCCTGGAATGCAACRACTA
   AAGAGCTATTTCATTGAATCTTTTCTAGACCGAGAGAAAGAAAAGTGCAGGAGCAGTGG
   ATGCTCTGTGTAGAAAGAACTTAGCAATTTATATTTATTTAAATGTAATCTTAAATTT
   GAAACATTGGTGTGAGACAGACACTTTGTTTGTATCCAGAAGATTCAAAAAATGGCTT
   TTTAAAGGAGATTGTGTCCTTTTGGATATTGAATGTATGATTAGGATAATGTTGTCAT
15  TTTCTATAAATATTTGTTTCCCTGTTTGGACTAAATGGAGAAGTACACGGAATCCTTGTGA
   ATCGAATGACTTAGCCATTATTGAGAAGTCAAAAGAAAAATAACCAAAAAAACTTTGTG
   AAGTGTACCTTTAATACAAGAATTAAAGAGAGATGTATAAAAGTTTTCTAACAAATTTGT
   TCACCAAAAAAAAAGTTTTCTAACAAATTTTAAATCAAAATGCAAAATTAAGATGAAAT
   TTTCTTATTTCTTTTTTAAACATAATTTGAAGAATTTGGTTGCTTTTTTGCAATTTG
20  TTTCTAGATATTTCTAACTGTTGGGAAATAAAAAAATTTGCACACAAAACATAGTTAAA
   TCCAGTGGTATTTATAGAGATTACTTCAACCAAAATTTGGATTTGGGTCAATTTGATTT
   TGGACGGATAAATCATCCATTAGTCAAATTTCCACAAAAATAATATGTGAATTAGATTTCG
   ACAAGGCTAATTCCTCCACAAATACGATACATAGAACAAACGCTCTGACTACTTGACGT
   AACAATGT

```

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 142>:

GNMCG44R gnm_142

```

30  TCTTTAGTTTGAGATTAGTTGTGCAATCAAAGGAAAGGAACTTCTTGGCGAGTAGAGA
   GAAATGGTGAATTTGGTGAAGTGAACTCTTTTTCTCAATTTTAAATTCATTTTGTGTA
   TTTTATGACGAAAGTCAAACTTTGACCGAAAAGGAAGAGAGATAGTCAATCC
   GGCTGCTGGGCTTATTGGGTCAACGATCATGTGTTTCATTTGTTATGCTTGACGAACG
   AAACCACTATATTTTGTTTAATATTACTTCTTTTAAAGTAGGATAAAACATGTCATTGT
   TTTACAAAAAATAAATTAACATGATAAATTTCTGGTTCCTCGAATATACTTTTTTTGTG
35  GAAAGGGTTTTCTATATACTTGAACATAAAAAAGTATACAAAAAACAACAAATTAAC
   CAGAACTAGATTGGGGAAGAAGACCACTAAGTACTTTAACAAAAAGAGATATCAAAAC
   CTATATATCTTGATAATGATGGATTCTTTTGGTTTGCATGTTAATGATAGTTTTTATG
   GTAGAACAATAGAAAAATTGACTGAACA

```

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 143>:

GNMCG46F gnm_143

```

40  CCGTGACTTCTTCTGCGGGGATCTTCACGCTCTCATCCGAATTTACAGCCCAATAATCG
   GGTGACGATTTTGACGCTGGAGTTGAGGTATTCAGATCCTTCGCTTCATGCGTTGCAC
   CAGCATGTTGGAGTCTGTGGAGTAGGCTTTTTCGACAGACATTTGTAGTCGAACCCG
   AGCAATCATAAATTCAGACATCTCATGACGGCCGCGGCTTCATCAATAAAGTCAGTATC
45  ARGCCACGGTTTGTAAATCTGCAGTTCAGCATTGGTCAGCAGACCATACCATAGAAACG
   TTCGATATCGTTTTCCTTTGTAGGTGCTACCGTACCCCAAGATATTCACGCGCATCTCTT
   CATCGCAGCAACCAGCATGGTACCAGTCACGGCGCGGGCCAGCGCGCTCGTGTGAATA

```

GGTCAGGCCGCCGGTGGTGGTTATGAAATGCGCCACACTGAATAGC

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 144>:

gnm_144

5 CTAACCTAAAGTTATGGTCTAAAAACACACTCTCATTACACAATACTTCTATTATTAAT
GTTTGGTCTGACTACAATCAACCTTTAGATCAAAATTGTTCTTGACTCTTGTGTGAT
TCACCACCAAACTAGACTTATCTCTATACATGTTTTCAAACCACCTCAACAAATATAAGC
AAACAAAGATCTTCTTCACTTTGCACATAACCAGAATGAATTTCTACTAAAAGATGAGAT
CTGAGAAAGATCAAGGAAGGCTTTTTTACCAGAACAGGAGCAGAGATGGCGACGGTAGG
10 CTTGAGAAAGAGAGCCGACGAGCGCGGAGACGTGGAGCGGAGGCAGTAAAGCTAGCC
ATTTCTCTATTGCTTCCCCTAACGACTGAGAGACTCTTCATTTGATTTTTTGTGTGTGTC
TGTTTGTGTTCTACAGCAACAAGAACACTTTAATTTCTTTGCTTGTGTGGCTTTTGGTA
TCAACATAAATATGTGGTGAATAAAAAATCTGTTTCCGAACCAACAAGCCATCTCAACT
GGATATGCTTCTATCCATACTCCACCAATCGACGCCCTCCAGGTGTCATATTTT

15

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 145>:

GNMCG47F gnm_145

CGAAGCTCTGATGTCCTTCTCTTCTATCATCTCAATCATTGATCCCTGAAATCTTTCTT
TGGATCAACGGACCGCTTCATCACAGCGAAGTCTCCTAGAACATCTTGTGTGCTCTCTGA
20 TCTTTAGAAAGTGCTTCTACGAGTACCTGAGAGTTGAATTTCTAGGTGAATTCATCTTTGA
GAGGTTTATCCGACGAGATGGTTTTCTTCCACTAGAACTTGCCTTTGGTACTTCTTCTC
GGCTTTATATTCAATTATCATCTTCATCTCTTGAAATTTTACAGAAAGATGGCTTTTCTG
CGGTTTCTTAATCGGCATGCATGCAGTACAAGCTTTCTCTACCGAATCAATCACTTTG

25 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 146>:

GNMCG48R gnm_146

ATGGCATAGCTATTCATTACAGATCAAATTCACCTTCACTTGTACCTGTGCCATACCAT
GCAATATATCAAAAGTAACCTTTAGGATCACTCTCAAAGTTATCTCTTGAAATGTAAGAAG
ATCTATTGCTCCTGGTGCTACCATGTAGCCACCTCCGCCCCACCAACCCGCTTTTCC
30 CTCTCCACCGCAACCACTTTGCTCCTCCACCGCCGACGACGCTCTTCTCTCCAC
TGCCACCAACCAACCACTTTTCTCCTCCACCGCTACAGCTAACGCCTTTTCTCCCA
TTCTTTGAAATAGTAGTTCTTAGTTTCACTCTCTAGAAATTTTAAAGATTTTGTGTGAAT
GAGAA

35 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 147>:

gnm_147

ACAACTCTTCACTATACTATGCCATATCCATCAATCTAACATCCCTGAGACCAAAATTA
GAAAGCGAATTGAAGAAACCGCAGAAGTAGAAGAAGCTCACCGACGGAAGTGATGCTCTT
40 GAGCCGATTGCAAAACGAAAAAATCGGAGCTAAAACAGATAACAATAGCAGCGAGAGGAT
CAGAATCCTCTGCCAACGACGAACCTTGATTCATCAATGTGCGTAACTTCTCAGAGAAGCG
TTCTATATTTTATCTCGTTTGGCGTTTAACTGCTTCTCCAGGAAGAAGAGAAGCACATT
CCGAGAGGGAAGAACACAGATCTCGGAGATTCTGCTTCTTCAACAGCAATTTGAAGAA
AACGATGACGAGATTAGGGTTTTTCAGATTCTTCTGCAATAGGATTGATAAATGCGAGAG

TCTGTTTCTACGATTTTCATATCTGGAGATTGAGACTTCCTCGTGCATGTTTAGAGACTT
CTGCTCTTTATTTTTTTTCGCTTAACCTCAGAATTTT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 148>:

5 **gnm_148**

TTAAAGAATGTCCTTTATTAGTATCATCATTCATCATCAACATCAACTTGAGACATC
ACATTTACACGCTTGTGCTCACATAATTAATAAATTTATTTATGGTGAATTTTAAAAAT
TGTTTGACTAATTGAAATGTATTTGGTGAAGAACTGAAATCATAGAACATACTTTT
ATCTAAATATTATATAATTAGGGGAATAGTACAAAAATAATTATAAACACAGAGATCAG
10 TTGCTTCTGATTTCTGACAGATTTCTATCATCATTCATGGAGATTTTACTCTTCATCGA
AATGATAAAATAACTGAAAAATGTAAATAGCGAATTATAAACAGTAGCAAAATGTAAACA
GTTTTAAAGAAATACACAAAAAGGTTGACCAAAATGGCAATTACAAAAGAAAAATACAGCTT
CTTTTCTCGAAGTATGCTTTTGTATTGAAAAATATTAACAGCTTCTAAACGGACAAATC
AATTAAATAAATAAAAAACAAGTTTTCACAAATTCACACTAAAAGTTTAAACATATGTGAATC
15 TATCTAGGTTAAAGACTCAAAGTACACGTTATAATGAGTTCAATAGTTTCATTTCGATG
CTTCTTTGAATTTGGTAAAGTGTGAACCTTATCTTAAGTTTTAGGTAGAAATAATTTAG
TATAGTAGCACTTTATGTTAAATTAAGGTGATACAGATACACA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 149>:

20 **GNMCG53R gnm_149**

GAAAAATACAGATGCTGGCGTAACAGCATTCTGGTGAGAAACGTTGGTCGMAACTCAT
ATAGCGACGGATTCAACGCTCGCTTTCACGTTCTCAATGGTATCCCACGCCATTCGACA
GTCGCGCAATCTGCGTCAGGAGTTGATGGAAGTTGTCTCATCAAGTTCAAAAAATCATCCAG
25 TTGCTTGCCTCAATGGCAATGCGTTGCTGGTGAAGATTTGTTCCAGTTGATAGCACTG
GCTTTCCGTAATCATGCTCGCCGCCCGACGCGCCACGCGCACTCAATGGCTGACGGAT
AAAACTCGCCGTTGCGCACCTGGGCCATGGAAATTTGTTGACGTAGCTGCCACGTTGCGG
ACGAATTTGAATCAGGCCGTTTTCGCGCAGTTTAATAAAGGCTTCACGAACCGCGTGGCG
TGACACATTGAAACGAACAGAACTTCTTTTCCGACACCGGTGCTGCTGGAG

30 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 150>:

GNMCG56F gnm_150

CCGTGGACAGATCCTGACTCTCACGACATCCGAAATTTTCAGAACAAAGGTAAAAATGATCT
TGGATAGAAGCTTGAATCAGCGCAACAGTTTATCCCTCACACACAAAAAATATTT
AATTGTTAAAGACATATTTTACACATATTTAATAACATTAATAGGTCAAGAAATTTAATTT
35 TTCTAATTTGCAACTAGATCAATATATAAACAGAAGAAGAAAAATGTTACGTGCTCTGCGC
CAACAAGTCTGTACATTTCTAAAGATGAGATCTTCTTCTGTTCCGTCATATTGATAAATC
CCCATTTCATACTACTCACTTCTGCATTTTAGTTAGTATATAAATTCAAAATATCAGTGA
AAACGTACATCACAAAAATTTAATGTTACAGGTCAAATGAATGAGC

40 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 151>:

gnm_151

CAAGACTTCTTCTTCTCTGCGTTGAGCTTTTATGTAGGTATCAGCGTCTCTCTGAGC
CAACTCAGCTCATGTTGTAAAGCTTTCAGCTTCTCCTCAGCGGCTTTCGCGATCTCGAG

CTCATTTTTTCAGAGAATAAGTCTCTTTCTCAAAGTGCTGAAGCTTCTCTTTCGCGATACT
 CAGCTCTTCTCCAAGGCTAGCACTTTGTAGCTACTGCATCTTCTTTAGTGTCTCTCTTT
 ATCCAAATCAACACTCTTTTGTTCAGCACCAAGATGATCCTCTGTGTCAAAAGACATGAA
 5 GCTCTGAAGCTGATTCTTCAGATTAGCAATCTCGTCTTCGTGCATTTCGCATCTTCTCATC
 AGCTTCTTTAAGCTCTCCCTCATATGTAGTAATTTTGTGAAGGAGATCAACATTGTTGTC
 ACCATCAACACTTTCTGCTGGAGAAGGAGCTTCTGTTTCCTCTCTTGAAGCTCAAGCTC
 AAGTTCAAGCATTCTACGGATCAATGCCTCGTCACCGTCTTCATCATTTGGCAGAGGAATG
 ATCAGAATCAGAACCAGAATCTGTCAAGACGATGAATCTTCTCTCTTTATGGCTAGA
 TTAGCGGCGACTCAACTCTCTTTGGTAGGAGATGATATCTCAAGAGAGCTCTGTGACTG
 10 GATCTCAGATGTATGGTTCTTCTGAAGTTCAACCACTAGCTTGATCATACCGCTCAGCCAA
 TCGCGGATACATGCGGTAGAATTCTCGACAAAGCTGGATTAACTCGGGACGCTTCTGAAA
 ATACATCTGAGCTTTCTTTGCAAAAGAGTCTGCGTCTTCTTCAATCAGTTTTAAATGTG
 GTTCACGCGATCATCCATCTCTGAGAAACCAAAACAAGAGAGAAAACATCAGAT
 TGTGTTCTTTTGTAGTAAGTGGAGAGCTCAA

15

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 152>:

GNMCG60F gnm₁₅₂

TCCACAGCTCAAAGACGTGAGTAAACACTCTAAACCCAAAACAAAGCTTCTTCTCTT
 CCTCAACACTTTGTAGCARGAAGAACTTCTCCTCAGATTCTTCTCCTCAACACTCTTATT
 20 TCTCCAACAGCTTAGTAGCTAACAATCCTCCTCACCATAACTCAGCAAGAACTCTCTTC
 ACACAAAAAGATGAGTAAAGAAAGACACTTTACAAGCCATCCCTTAAACCTTTGACTC
 CTCCTCCTCTTCTTGTATCTGCAAGTTTCAACAAGAGCAAGATCAACGATCAAGATTGCT
 CTTACAGCTTGTTCGCCGTATTGAAACCTCCCTGAGTCTTTTGTGTATGTTTCTACG
 AAGAGGATGATGATGATGAGTTCGTTGAATTTTCCAATTCAGAGTCAACACAAAGAAC
 25 AAGCTTTCACCAAGCAGAAGTCAAAGTGATTGATTCCGT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 153>:

GNMCG62F gnm₁₅₃

CCATAGGTCCAAGTAATTTGCGGAAAAGTTAGTGGGCTTTAAATATAAAACATGACTGA
 AATTGGGCGGTATTCGACATTTAGTTGTATTATCTCTAAATATTCAAGACTCTCAATAA
 30 AATCACTCTGTGGGACTCAACGTTGGCCAGAGATCCGAGAGGGACATTAACCTGCTGGC
 AGACTGGCAGAGTGGCAGTAACCATACGCGGAAAGAGATATTCACACTTGTCCCGTAAA
 TCAACATCTTTACGAGACCTTCATGCACCTTCGGTCTTTTCATTGTTTCTGGGTGGTGG
 TGTGGCAATAGCTAGCTGTACGTTTGAGGTGGCAAGAACTCCAARAACCTCAGACAGTAC
 35 GTGAGTCTCAAAAAGTTTTCTCTCAGCTAGTTGGAGATTTTATAG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 154>:

GNMCG63F gnm₁₅₄

CAIATTAGATATTTTATCCAGTTGTATCAAGACCAAGTCCACTGGTCCAGTAGTCCCTCA
 TTACGGTAGCTTGGGACCTCCTTTCTATATCTCTCTTTACTCTTCGTACACAGTTT
 40 CTATATAGTTTTCTCTACCTCATCTACTTTTTTTTCATTGCATTCTCCAACCTCCAAA
 TCATCAGTTGTAATAATTTGTCCCTTCCACTTCCAATACCA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 155>:

GNMCG64R gnm_155

CCAAACACATCAATCCTTCTCAGTCCAACATGGTCCATTGCTGCTCTAATACTAGTC
 AAAAGCCATCAAGACCTGCTATTTCACCTCCTCCGTGGCTAGTAAATCCGCTCAGGCGC
 GGATTGGAAAGGCTCCTGTCGAAGGCCGAGGGAGGCCCACTTCTCCGGGTATTGCGC
 CAAAATATACGGATAAAGAGGTTTCAGCAGATCTCTGGAAAGTATCCTTTATTGCTTCTA
 GTACTTTGGCCAAATATTTTATTCTGGACAGACTCTGGTGACTCATTGTTTATCTTAAAC
 AAATCTTAGTTTGAATTTGAACATTGTACCTCTCTTTGAGAAAACCTTTAGTGCCAGGTGA
 TGCTGGTCGCAATTGGTCGTCTAGTTCTTCCAAAAGCCTGTGCAGAGGTAATTTCCCAATT
 CCTTAGGTGATGCTCTTTCTTGCTCTGAAATATTTGTAGAGTTAGTACTGATGTCT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 156>:

GNMCG64F gnm_156

CCTTTTGTACATAATTAATTTTATATTATAAAGAGTATATAAATAACATATGATTGG
 GATACATATGGTGGATTATTTTGAGGATTTCAATTGTACACCTCTAGAAATACAAATAA
 AATAAAAATACATTTTGGTCGTAGATTGTACAAGCATTGATTTTCGATACAAATTTTGT
 CATCAATATCTTCAAGATTTTCCGCGGACAGTCCCGAGACATGCGTTTAAACATGTGAGTG
 ACACATCTTAAATGCGTTTCAAGATTTCTAGCTCTGGATCTTCACTGACAGATTTTCGT
 GATGTCCAAACACCCGCCACACCCCGGAACCGAGCGAGCTAGTTAACCTTGAAGATCGT
 CTAGCCTTGGTTAAACAT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 157>:

gnm_157

ACCACAGTAGAAGCCTAAAGCATTGTCCAGATATCAAATTCAGGAGTATAAAGGAAGT
 AACCACAACATGTTGAAAGAAAGAGAATAAAGGTGAAACATTACCTTTGATGAGGAGAT
 TGTAGAGTTAACAACAACCGAAGAGGCCAAACATTGTGAGAGAAGACTACGTAATGGTA
 GAGATCAGGATCATTATAACTTTGTTGCAAAAGCTGCGCTTTTTCGTGATCCAGGGTAAA
 ATATTCGTGTTGTCAACCCGCAATTGAGAGACAATGAAGCCCTTTTGGGGTAGTCCTTGTCTG
 AAGCTGCATTAATATGCTGCTTGTCTTCTGCGCCCGAGCTTGTTCTTCGGTTTTATA
 AGTCATGCGCTTGGAGTTTGGTAGCAATGGCAGGGCAGTTGTGAAAGGCACGGCTGACCTT
 GTATAAGGCAACTTCCATGGCCTTCAATCTGTTAGGAGAGCTGAAAGAAACAAACATT
 TATGTATGACTCGTCTAAATTAACACAATATTCATTAAAGATTAGCTTCAATAGTAAAGG
 CCAAACTTTTACAGGATGGAACAGGACTCCCTTTGAATCAATCAGCTGTGCTCACTTC
 TTTGGCAAAATATTATCGCTTGGTAGTATCACCAAGTAGCCCGTTCCAGCTCTTTCGTTG
 AACTCTCAACTCGCTTACGATTGGGAGTTATTCAGGTAGGGCCAAATTCAGATAGGC
 TTTGCGTTGGATAATTTGTCTCTGATCTCGCTTACCCTGTCATCTGTTGCTCTGTCAAG
 TTGAAC

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 158>:

GNMCG68R gnm_158

GGGACAATTGTGACTATCCACCACCATGAATGTGATTTCTTAGTCATAGACCTCTTAAAC
 TCGCTTCTTGCTCTGAGCCTGAGAGAACATCAGACAAAGTGACTAAATGTTAGGACCAAG
 AGACTAAACACAAGGATCTAATGAACCTTATATAGTGAAGATCAGCAAGGTTTCAATCCGT
 AGACGAAGCCATGACCGTGGAGTGCAGAGAAAAAACCCCTACAGAAAAAGATCAAGAAC
 TTAAGTCAATTGACAAAACAAAGGCAATTTGATGTTCAAGACTATGACTTTCTCGGAT
 TCGTTGAGTTGAACAAAACCTAAAGAAACAAATTAGATGAGATAAGAGGAGAAAAAGGAGC

ACGTGAAGATTCAACAACCCATTGTACTTTGTAC

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 159>:

gnm₁₅₉

5 CCCCCAACAAATGAGCACCCTAATTATTATTGCAATCGTAGAACGAACCAATTTAAAGACA
TTTTCACAAAAACATCTCACAAAGCAAACAAGGGAATATTTCAACAGATTTTCACAAA
CATTATAAAGTCATCTTCATCCTTTTTTTTGTGCAGAAAGTTTAACAGTTCCTTGGTTT
CATAACGATTATGAGTGGTTAAGGATGTGCAAGCTGAATTGCCACCTTCTCACTAGT
ATCCACTTTAGACTGTCTGGAGGAGGAAGCTCGAAGTTCTGGACCCTCTACCAAT
10 GGTGATCCCCAAAATAGGCAATGCCAATATAATCCGGGACAGCTTCGACGTTCCAACACC
AAATGGCACATACCTGAAGTCATTACCGTTAGCTTCCACGTGCGATTCTTCTTCAAGAA
CCTCTCTGGTCTAAACTCTTCAGGCTCTTCCAGCTGTGGGGTTGTTTGTAGCCACCA
AGCATTAACAAGGATTTTGCTTCTGCTGGGATACGTAGCCAGCGAGCTTCGCAcAgg
AGGTTTC

15

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 160>:

GNMCG72R gnm₁₆₀

CATACAGAAGGAAAGGACGAATAATTGTTTTGGAATTTGCATGCATTTGAATTCAGTAGC
TCATAATCTTCTAAGCGAAAACCTTGGGAAAACCTTTATCACCTATAAAACATTGAAAATAT
20 TGAACCAAATGGTGGTCTAATAGTTTGGAAACCTAATGTGTGGTCAAAGTCACTAGT
TTAATACTTGAGAGGAATAATTTATGCTCTAAATAATCAACCAAAAATTTTCGATCTTT
CACTCACTCACAGAAGGAAAACRATTCATTGTCTAAAGCGTCATGACTCAGGTTGCTTGA
ATCCTTAAATTTTTTTTGTGTTGTATGGAAACATCCAAAATCTAACATGGTTTATGAAT
25 TAAGTCGCAACTGATTCATTTTATATGTTTTCAGTACTATAACGTGTTACATTTAAGTG
AAGGACATCACATATATAAGTATACACAACAAGTTATCTAATCCAACAGTCCAAGAAGT
TTTTATTTAATCAACAAAAGAAGCAAGGCTTAACATCGAGTTCTTCGACTAAGTCTGTAA
AATCCGCTCAATCGGAAGTAGACACAATCACACAATGGTTTTTT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 161>:

GNMCG73R gnm₁₆₁

TAATTCTTCTTCCCAAAGTTTCTGGTTCATACTTCCATTAGTTTGTCAAACGATTTTC
AGGTCAAAGGCGTAATGATCCATTTTATTTTCATTGCACTCGAAAATCCAGTTTTCATT
35 AGTCATCCCTTCTCCTTGGTGTGGAATTCGAACCGTAACAGATCTCCAGCTTAAATAGCT
GGGTCTGTCTTGTGCTACTGGCTGTTATCACAACCTTGTTGGCCAAATGTTATCCTA
TGCTTATATCTCTTTCCCTTTCCATATGCTCTTATTAGCCAGTGGTTCAGCTAAATA
GTAGTCTTTGTTGGAGTCGTTGCTGTATCTTAACCAAGTTATATACAGATGACCAATACG
ATCCAGAAGAAATATAAGGTTTCATCCACCCAACTTCTGTTATCAGTCTTGCCCATATCA
40 AGCAATCACACTTTTGTACTGGCCATTTTATAGTGGTCTCTTAACCAACCAAGACGT
GTTTGCTTTCAAATACAGCTCTCAAGTTGTGGTGAAGTGAAGCAATATATGTGGA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 162>:

GNMCG73F gnm₁₆₂

GATATATTTCTCTGGTTAAGAATTTGAATGGTTGACAAAGAAACGGTCACTCTATATACT

-650-

TAGAAAATATAGTCATACATAGACACCATCGGTCTAGTTATAATAA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 163>:

GNMCG78R gnm_163

5 ATATTGCTTCTCTTGCATCATAATGTAATACATTGCTAAATGTAGAAAAATATCTACA
AACAAACACCACAGCGATTCCAATACTAGATATTGGTGACTTCTTGAGTATCATAACTTG
TTTCCCATATATCAATTTAACATTTTAGCATTCAAATTAGTTATGAAGTTTCAATTATT
CTTGCTGGAGATAAATTTTATTACTAGGCATAAATCAATCACAACGTGATATGTGCATG
CTTAGTTAATAGAGTATCTATCGAAAATTCGCTTTTAAATTAAGTAACCTATATCAT
10 CATCATTATTAAGCGACAACGAATTTAGACATTTTACCATCATTACAGATAAATGGT
GATAGACGAATCATACGTTACTTTATAGATAGTATAAAATAAAATTACGCCAAGCTCGTCT
ATTGCGCTTGTGTTAGTAACATATGTTAGATGAATTGGCCACGTTGAATCTAATTCATGT
GTGCTTTTGTAGAAAATCGACAAGTAGATAATTTATCGTCACAATGACCCAAGATTCA
AACCTAATTGAATAAAACCTAGTAGTA

15

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 164>:

GNMCG80F gnm_164

TATAAGTACTCAAATATAAACTCGAGACGACAAAAAAGTTATGCAAAAGAGTATTATT
GATTGTATATGTTTAAAGTTTTCATTTGTCACCATGTACTATATGGTGATTCCCTTTT
20 TGTATTAAATATAATGTATGTACTACATCTTCTTATTGGTACATTGATTTATTTCAA
AAGCAAAGTTTCAAATTTTGTAGTGCACGTTCAATAAAGTTACATTAGTATTTGAATTA
AGTTGTTTAAAGGCTTTTCAAAACAAAAAACAACGATGCCGAATTCGTTGGTTC
TATCATATGGAGAAAAGATCTTCATTCGGATAGACCAACCGCCAAATAGTTTGAACAT
TTTGCAAAACATTGCCGATTGTTTGGGACTTTGGGTTTGATAAAGGAAATTCCAATTAG
25 ACAAAAAAAGGAAATTCCAATTACG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 165>:

GNMCG82F gnm_165

CCCAGGACATTTCATTCATCAATGTTTAGGATTGGATTGAAGCTCTGCCACTTGGGTTT
30 AGTAAAAACCCACATTGAGATTGCTGGGTAAATTGAGTGAATCTGTCAACACATGGAATACT
ATTTTATCCGGTCTCTGCAAGCAGTAATATCATTGTTAAAGACATGTGGCTTCAGCAG
AGATTGCGAAAAGAGCATTAAAAACACAAGTTGGATCGGGAATCTTGCAATTAAACAGTT
TAAGATGCTTGCACATGATTTAAATGATACCTGAGTTTGAATTAACAAGTGTGAAGAT
GCTTGCAATATGGGCAATAGTTTGAATCATGAAACATAAAACAAATGCAAGGTTCTC
35 AACTGTAATTTAAAAAAGATAAAGTTATTCACTGAACAAGAGCACAAAAATGTAAC
TCCTTTTCTAGTTTCATAACTAGACAATATCCTATATATGGTACTAACCACAGTnGn

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 166>:

GNMCG85F gnm_166

40 CCGCAAACTTCTGGTCCAGAAAATGGTAAGTATATGCTTGTTATGACTTCCAGCAGTCA
TAATTTGGAGTCAGTTTATGAACCAATTATTTGCTTTATCGCTCAGAACCATGACATGTAA
TTTCATTGTTGCAATTTTCTGTTTGTGCACCTGTTAACGGAAAAAGGAATGCAAGATCT
GGATGCTGATTTTACAGCCTTAAGGACACATGTCCGGAGTAGTTAAGTTCGCTCAAACT

CATTATCTATGAATATGGTCCTCTTCGTCTCATGTTGTATGTGATAATGCAGGAAGTTCA
 TTTAACCATATAGCAGAACCTACTTCCTCTAAGAGGCAAGCCAGTTTCTTTGGTTTTGC
 TTTTCATATAATGCCACTGCACAAGTTTTCTTCTCAGCATGTATATCATCTTGGTTATCT
 TGGCTAACAGAAITGCACATTTTCATAGAAATTTTGATGCTTTACTTTCTTACAGGACTTT
 5 GTTTAGTATCCCTG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 167>:

GNMCG87R gnm_167

CTCGGAATCCATTAGTTTCATTCCACGGACAAAAACAGAGAAAGGAAACGACAGAGGCCA
 10 AAAAGCTCGCTTTCAGCACCTGTCGTTTCCCTTTCTTTTCAGAGGGTATTTTAAATAAAA
 CATTAAAGTTATGACGAAGAAGAACGGAACGCCCTTAAACGGGAAATTTTCATAAATAGC
 GAAAACCCCGAGAGTCGCCGCCCGCTAACCTGTCGGATCACCGGAAAGGACCCGTTAAGT
 GATAATGATATCATCTACATATCACACGCTGCGTGGAGGCCATCAAAACCAAGTCAAATA
 15 ATCAATATGACGCGAGTATCGTATTAAATTGATGCGATCAACTTAACGTAAAAACAACT
 CAGACAATACAAATCAGCGACCTGAATACGGGGCAACCTCATGTCGAGCTCGCGAGCT
 CGTCGACAGCGACACACTTGCATCGGATGCAAGCCGCTTAACGTGCCGGCAGCGCTGGGT
 AACCGATTATTTGTCCACATAACGAGCGCAAAATGTTG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 168>:

GNMCG88R gnm_168

TTCAGTAACTTCAGCAGCTTTCATCGTCATTGGAAAGACATCTCCTGTCACCTTATCAGG
 TTCTAGGACATCTAAAAACATGCTTAGTGTAGCATTTGGGTATCTTTGCTGAAAGACG
 CATTCAGCTGGCGCAACATTCTTGGTATTCTTGTGCGCGTGATTGGAATGGTGCTTTATT
 20 CCTATTACTGCACATCGAAACCCCAAGAGGCCACAGAAACATCAACTCAATTGCCTC
 AGGTAATAGTTTCACTTCCCTTTTGGCACAATGTGACTCAACTTCATTTCATTATATG
 CGTAACGAGAAAAACAGAGTTGAGAATTGATGTTGTGAATGTGCTTGTCTCAGATGGAT
 GAAAAACGAGAAAGATCCGCTAGTTAGTGGGAAACGGGAGCGGATTGATATCAGACAA
 25 GGAGTGCAAAAGCAGGATCCTGTATGGAATTCAAACAAAGATTTTCAAGCGTAGAGCTGG
 AGCTCGATATCTGAAATCTGTTGTAGTATCAGATTTCATAGGTTTCCGTTTGTGCAACTTT
 30 GATATCTCTCTTAGAGAGAATCTACAGCTTCCCTTTCAAGAGGAGGGGGAGAGGATTAG
 AGGAGGAACAGCTTTTGTGTATCCATTTCATATAC

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 169>:

GNMCG90F gnm_169

CCTGAATGTGCATGCAGGGGTCACCTTCCAATAGAGAACATCCTTGAAGATCTGTGTTCC
 35 CGGTACTGGCCACCGACCAAGTATCAGACACCATATACCACGACCAAGCTATCACAGG
 GGACCTGTTGCAGTTTCATGACAAAAGAAAGTTGGATTTTTCTTAGGATTAAAGCAACAG
 ATTGTGCAAAACCAAGCTGGTCAGAATTGGGTAGACTTGGAAATTGAACTCAAAACCGTT
 ATGATATCTGCAGATACATACGTATCATCGTTATGGATCGCATCTGGTCTTAGCTGAT
 40 GGTCGGGAAGCCGAGATGTTACGTGTACAAAAGGAATGGAAGATGCAAGAAAAGGAAA
 CGATTTACTGTGATTGTTATGTGTGAAAACCTTGGATCAGATCTAGTAAAGCCATAA
 AGGCAACTGTTAAACAAAAGTGTGATTTTTGTGTTATGAGTTGTACTATAGAT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 170>:

GNMCG91R gum_170

5 GGAAGCCAGTAAAGATATACGGCAGGCATTGAAGAGTTTCGCGGGGAAGGAAGTGGTTTT
 TTATCGCCCTGAAGAGGATGCCGGCGATGAAAAAGGCTATGAATCTTTTCTTGGTTTTAT
 CAAACGTGCGCACAGTCCATCCAGAGGGCTTTACAGTGTACATATCAACCCATATCTCAT
 TCCCTTCTTTATCGGGTTACAGAACCGGTTACGCAGTTCCGGCTTAGTGAACAAAAGA
 AATCACCAATCCGTATGCCATGCGTTTATACGAATCCCTGTGTAGTATCGTAGCCGGA
 TGGCTCAGGCATGCTCTCTCTGAAAAATCGACTGGATCATAGAGCGTTACACAGCTGCCTCA
 AAGTTACCAAGCCTATGCTGACTTCGCGCGCGCTTCTCGAGGCTGTGTTAATGAGAT
 10 CAACAGCAGAACTCCAATGCGCCTCTCATACATTGAGAAAAAGAAAGGCCGCCAGACGAC
 TCATATCGTATTTCCTCCGCGATATCACTCCATGACGACAGGATAGTCTGAGGGTTA
 TGTGTACAGATTGAGGGTGGTTGCTACATTGTCTGACCTAGGAGGTAATTTGT
 CACAGTTTTGCT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 171>:

GNMCG93R gnm_171

15 TACATAATGCTGAAAAGTTGTACATGTATCAAATTGAAAAATTGATGATGCAAGTTATA
 AAGCAAAAAAGGATTAATGCACACTTACCTAATGTCGAAATCTAGGTTCTTTAACTTTG
 ATACGAAATCAAATTTTTTCAAGATATACATACTACCTAAAGTAAAGTAGAGGGTCT
 TTTGAAATTGATTTTTCCGAAGAAACCGAAAGTATCTTTGTTAGCCATTAATCATGT
 20 AGTAACATATCTCTATCCTATCGGTATGATGAGGACCAAGAGCGAAGTACCATGTACA
 AAATTAGTTCATAAACGTAACCTTCAATCAATTAATAATCGATGAATTATTATTTTT
 ATATATTAATAATTTTTATGACATAAATGATATAAATCAATAAAATAATTTAAGAAGT
 CATTTTTGAAAAATCTATGTAAC

25 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 172>:

GNMCG93F gnm_172

TTATTAATTTCTTTTTTGCACTCTCATATGCAAAATCCGGACCACTCCCTCTCTAATCGA
 AGAAAACAGGATGTTGATGAACCATGGGATTCCAAATTACATCTTTGGAAACCTCTAAAT
 30 TTTCTGTGGATGTGGCAACCGGAACAAAGGACCCAAATCTGAGCTTGGAAACGATCC
 CACAATGATGTTACAGGGAGTAAACCAAAACAAAGGATCATAAAGAAAGTGAATAACTC
 GAGGAAGAGATCAGCAATACCGGTATCTCAACATCAGAACTGCTACATCTAAACGA
 ACCGCTCGGACTCGTCGCAAAAGCTCATCTACTTTGGTGATTCTGAATTCACCTGTTA
 CCAGGTGACGCAAGCCTAAAACAGGAGAGGAGAAACGGTCACTGTTGGTTCTCACTGTGA
 35 CGCTCAAGTAACTAGTGAGATTCCTGTTCTGTATCTGAGACTCTGAGTACTCTGATATT
 CAATATTTCTGTGC

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 173>:

GNMCG94R gnm_173

10 GTCACCCGATTGAGAGACAATGAAGCCCTTTTGGGGTAGTCTCTGATGCAACTTTGTGCC
 ACATATGGAAGGTTCTCCGTAATTTTTGTGGCATAGTGTGAAGTTAATCAAGAAAAAGTC
 ATPTCGATTGAGAGCACTATGACCTGAATATGTTGGCTAGTTTAATACTTTGCTGTGAC
 ACCAACAATTTTTTGTAGAACCTGAAACAATCTCTTTAGTACTACACTCTCTTACT
 AGTTGCTCACCAGTAAGAGCTTTGTTGGTGGCAACTTATTCAATTTCTAAAGAACCACT
 45 CTATGTATTATTATTAGGCCTGACCACATTTTGCAAGACTTGAGAGCCAAATATTTC
 TCTAAACGTAAAAAGGAGAGAGCGCCTGAAGTTGTGCTCCATCTCATTACCTGCARA

GAGGAAGGAGAGGTCTATCTCGTCTTTGGTGGTAAGCACACCCAAGGTTTCAGCACAAAG
TGTACCAACAGGAAAAAGAACAAAGCTGTACGAGAAAAGATGTAAGAGGTAGTGGTTT
ATTCACTAAGAGAACAGTGAAGAAGGAAGAAGAAATTGGAG

- 5 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 174>:

gnm_174

GCCCATACGGCAGCAAAATTGCTTTGCGGAATGCTGAAATTGATGTTCTTCAGAATCGG
GCGGTCCGCATACGCGAAGGCGACGCTTTTCATTTTCGATAAAGGGGGCAATTGTGGTGG
10 GCAACAAAGCGATGGGCGTTACACCGAAAAACGAGCGCGTGATTTCCAACGTCGTCTATG
ATGGGCATGGGCGAGCCGATGGCGAACTTCGCAATGTGCTTACCGCCTTAAGCATCATG
CTGGACGACCACGGCTACGGTTTGAGCCCGCGCCGCGTAACCGTTCCACTTCGGGTATG
GTTCCCCAAATGGACAGGTTGCGCGATGTCATGCCGGTGGCTTTGGCGGTTTCCCTCCAC
GCTTCCAATGACGAAGTCCGCAACCAATCGTACCGTTGAACAAAAAATATCCCTTGAAA
GAATTGATGGCCGCATGCCAACGCTATCTGGTCAAAGCACCAGGGATTTTCATCACTTTT
15 GAATACGTCATGTTGGACGGAATAAACGATAAGGCGCAACATGCGCGCAACTGATCGAA
CTGTCACAGATGTTCCCTGCAAGTTCATCTGATTCGTTCAATCCCTTCCCAAACTCC
GGATACGAACGCTCCAGCAATG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 175>:

20 **GNMCH55F gnm_175**

TATCCAITTAATGTTCACTTTTGAAATATGTTTTGTGGTTAAGGAATTTTAGTGGAAT
ACATGTCAGTATTTTAAATGTGTTCTTCATTGATTTCTGGCTTGTAGTCTCTGGTG
AGACGCCCTACTATATTTGGTATCCCTTGCTCTTTTTACTTATTTGATCTTTCTTATCTTG
CTGTTTTTAAGATTTTCTTTCTTTTTCTTAGACAGAGTTTCACTCCGGTCTCCGAGGC
25 TGGAGTGCAAAATGGCATGACCCCTTTGGCTCACTGGCTACGGCCACTTCTGCTATCTGC
CGCCTCAGCCTCCAGGTT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 176>:

GNMCJ01F gnm_176

CGTCATTATGGATCTTGAATCCTCTTCTCGGCAGGTTGCAATTAGCGAGTGGGTAGTATC
ACCAACAGCGCGAAATCCGCGCTCGATAATGGATATGTTCTGATATAACGTTTAGTAGG
CACACGATACCTTCTTCTCCAGACTCTGGTGAAAAAATCTTGTTGTGCAACCACATC
AGGAATAAGCTTCAAGTAGAAGTGATAAACATCGACTGGCTGGCGTTGTCAAGACGACGTT
AAGATCGGCGTTATGTACCGATATTAATTTTCGGTGCTCAGGCCAGAACTCGATATTATC
35 GTTAATATCCAGTACATACGTCATAAACACTAAATCAATCGAAATGGAGATCACATAG
TTTGTCAAGTATATTTGGTATTTACGGCATAAATATATATTAATTTTATATTTCATGAT
GATTTGAAATGAGGCTTTAATGTTGCAACGTAACCTTTACGTAATTAACATGGTTAACA
TTTATGCCACTATTGTTTGTAAATTCATATTCGTAATGCTTCTGAATTTTTCGTGTGAT
GGTTTAAATACTATGGTGTTTACTCTTGAGGGGACGGCTATTATATAAATACGGACAT
40 TTCAATAAATGCCGTATAAACAGAGTATGATTCTGGCTGGTGGTTGAGTATCAATGGTG
GACCGAATGTGAACAGTAATAAATTCGGGTATTTTACCACCATCTCTCTT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 177>:

GNMCJ02R gnm_177

GTACCCCATTTCTCAATAGCGTTGCCGGGCGTCACGATATGGACAGCCTCGCGGAACGATT
 GGTGAAGCACAACCATCACTTTTGAAGAGATTGCTGGTAAAGGCATAAATCAACTGTA
 CCTTTAACGAGATTGCCCTCGAAGAAGCCGGACGTTACGCCGCCGAAGATGCAGATGTCA
 5 CCTTGCGAGTTGCATCTGAAATATGGGCCGATCTGCAAAAACACAAGAGGCCCTTGAACG
 TCTTCGAGAATATCGAAATGCCGCTGGTGCCGGTGCTTTCACGCAATTGAACGTAACGGTG
 TGAAGATCGATCCGAAGTGCTGCACAATCATTCTGAAGAGCTCACCCCTTCGCTTGGCTG
 AGCTGGAAGAAAGAGCGCATGAAATTCAGAGTGAGGAATTTAAACCTTCTTCCACCAAGC
 AGTTACAACCATCTCTTTGAAAAACAGGGCATTAAACCGCTGAAGAAAACGCCGGGTG
 10 GCGGCCGCTCAACGTCGGAAGAGGTACTGGAAGAACTGGCGCTGGACTATCCGTTGCCAA
 AAGTGATTTCTGGAGTATCGTGGTCTGGCGACGCTGAAATCGACCTACAGCGACAAGCTGCC
 GCTGATGATCAACCCGAAAACCGGGCGTGTGCATACCTCTTATACCAGGCAGTAACCTG
 AACGGGACGCTTTATCGTCAACCGATCCTAACCTG

15 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 178>:

GNMCJ02F gnm_178

CCTGACTGACGGAGACGACCGCTTTGACTAATTTGAATTATCAACAGACGCATTTTGTGA
 TGAGTGCGCCTGATATTCGCCACCTACCTCCGATACCGGAATTGAAGTGGCTTTTGCAG
 GCGCTTCCAAACGACAGGTAAATCCAGCGCGCTGAACACGCTGACTAACCCAGAAAAGCCTGG
 20 CTCGTACCTCAAAAAACCCAGGGCGCACCGAGCTTATCAACCTGTTTGAAGTGGCTGACG
 GCAAGGCTCTGGTTGACTTGCCTGGGTACGTTATCGGGAAGTCCCGGAAGAGATGAAC
 GCAATGGCAGCGTGCCTCGCGCAATACCTCGAAAACGCTCAGAGCCTGCAAGGCTCTGG
 TGGTGCTAATGGATATTCGCCATCCGCTGAAAGATTGGATCAGCAGATGATTGAGTGGG
 CGGTAGACAGCAATATCGCGTTCTGGTGCTGCTGACCAAGCGGACAACTGGCAAGCG
 25 GCGCAGCTAAAGCGCAATTGAATATGGTGCCTGAAGCTGTACTGGCGTTTAAACGGTGATG
 TGCAGGTTGAAACGTTTTCTTCGTTGAAGAAACAGGCCTGGACAAGCTCGCGCAGAAAC
 TGGATACCTGTTTACGAGATGCAGCCTGTAGAAGAAACGAGGACGGCGAATAATTTT
 CTTGCTTTAATGCTTGTCCGGATGTGGCGTATCCGCGCCGTAATTTCA

30 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 179>:

GNMCJ03R gnm_179

CCCTCCCTAGTAGCTAGGACTACAGGCACACATCACCACATCAGGCTAATCTTTAATTT
 TTTTGTATGGGGGGGGGGTCTCACTACATTTGCCAGCGCTGGCCTTGAACCTCGGCCCT
 AAGCAATCCTCCTTCCTCAGCCTTCCAAATGCTAGGATTAGAGGTGAAGCGACCACAC
 35 CTGGCCAGCAAGGTTGGGATATTTTAAACAGCCAAAGTATTTCCAGTTCCCTCAAGGGCC
 TTCATGAAAAACAATTTAAGTCCAAACAGAATTAATTTAACTCACTGAGTTTAAATAA
 TGAGCGCCAGCTATAAAGATTTTGAAGGAAGTCTGTGCCATTAATTAACCTCTGGCAAT
 AAGACACAGAAGTCTGAAGGTAGAGAGGCTTCTCATGGTTACCCAGTGTGAGACTCTG
 ATTCCTGGAGACCACAATTATGCACCAGGCAGAGGGAATTTCTACTATGCATTGTAGACTT
 40 TGATATGATGTTGATATATGGACATTATGCACAAATCTCAGAGCTGGATTCAGGAAAA
 GATTGATTGGCATTCCCATCCTCCAGCCCATCTGCTTTCGATGTATTTCCCAACACC
 GAGCTCATTCGGCTCTCAG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 180>:

gum_180

A A A G C T T T A C T G G G A C A C A G G C A T G C T C A T T C A T C A T T A T T G T C T A C A G C T G T C T T C A A G C T
 G C A G C G T C A G A G C T G A A T A G T T G A G G C A G A G A T G G T A G C T T A C A A G C C T A A A A T A T T T A
 C C T G G T C C T T T A C A G A A A C A C A T T T G C C A A G C G C T C T T C T A G T C T A A A G T A C C T G T A A T A T
 5 C C T T T C T G C C T G G G T G C A G T G G T T T A T G C C T G T A A T C C C A G C A C T T T G G G A G G C C A A G C C
 A G G T G G A T C T G T T G A G G T C A G G A G T T T G A G A C A G C C T G G C C A A C A T G A G G A A T C A C A T
 C T C T A C T A A A A A T A C A A A A T C A G C T G G A C A T G T G G G C A G G C A C C T A T A C T C T C A G T A T
 T C A G A G C T G A G A A A T C A C T T G A A C T C T G G A G G C A G A G T T C C A G T G A G C C G A G A T T G T
 G C C A C T G C A C T C C A G C C T G G S T G A C A G A T A A G A C T C C G T C T C A C A A A C A T A T T T T A T T T
 10 T C T T C A T A G C C G C T A C C A G T A T C T A A A T T T C T A A G T T C T C T C T C T C T T A T T T A C T A T A
 C A T G T T T A A A A A A T T G T C C C A C C A C A C T C C C A C A A T A A A A C A A T A G G G C C G T A A G A G
 C A G A G A C T T T G T T T G T T C C T T C T C T A T C T T C A G C A T T G A T A C A T A A T G G G C T T T T A A
 A A A G T T A T T C T G T T A C A T T A C T G A C A T T A A A G T T T A C A A A T T G A A G C T A T C T G A G A
 A A T T G T T G T A T T G C T A A G C T A T A T A G C C A T T C T T T C T A T C G C T G T T T G T T G T T G T
 15 T T G T T G T T T G C T T G T T T T G C G A C A A G G T C T C A C T A C A T C A C T C A G G C T G G A A T G C A G T G
 G C A C A A T C C C A G C T C A C T G C A A G T T C T G C C T C C G G G C T C A A G T A T T C T C C C A C C T C A G
 C C T C T G A G T A G C T G G G A C C A G G C G C A G C C A C C A C A C C T G G C T T T T G T T T T T T G T T
 T G T T T G T T T G T T A A A C A G A G A T T T T G C A T G T T G G C A G G C T G S T C T C A A A C T C C T A A
 C C T C A A G T G A T C T G C C C C T C A G C C T C C C A A A G T G C T G G G A T T A C A G S T G T A A G C C A C C
 20 G C A C T T G S C C C A A T T T T C T T T T C T T T C T T T C T T T C T T T T T T T T T T T T T T T T T T G A G A
 C A G A G T C T C A C T C T G T G C A G

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 181>:

GNMCJ04R gum_181

C G S G C A T T C T A G C C G S A G T A C C G C A A A C T T G G C C C G T T C G T G G C T G A T A T T C A C C A G T
 G S C A A A A T C T G G A T G A C T A T T A C A A C C A G T A C C G C C A A C G C S T A G T T G T T T G C T T T C T C
 A C C C C G C C A C C C G C G C G A T C A C A C C A T G T T T T G A T G C A C G T T C A G G G T A T T T T C G C C
 C G C A T A T T G A T T C C A C A G A A C C C A G C A G C T G G C T G C G C T T A T C G A C A G T T A T C G C C G T G
 30 G C G A C A A C C A C T T C T T G C G C C S T G A T G C G T A T C A A A C A C T A T A T G G C G C T T T A T C C T G
 A C G C T G S C T T T C A G G G C A G C G T A T T T C G A A C T T G G C C G C G T G A T T A A C T A T T C G C G C
 A T T C A G G C C T C T T A T G A C T A C C A T C T G G T C T A G A A T A A C A C A A A T A T A C G T C T G C A G
 A T A A T C T C S A C T G S C T G C C G C C T C C G C A A T T C G T C T G C A C G C G T G C G C G T T G T A T
 T C G C T A C A C C A C G C C A G S G T C T G A C S C A T A C A T G T C G A A C G T C G A A A G C T A A A G C T A A C A
 A T G C T C A A C T G A A T G G G C T A C A A A T A G C G C T T G C G G A A A A A G G T A T T C C T T A T T G T A C C
 35 G T G A A G T G G A T G A C T T T G T G C C A G T G T C G A A A T A G T T A A A C A G G T G T G C G C G A A A A C A
 C G G T T A C C C A C C T G S T T T

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 182>:

GNMCJ04F gum_182

C G G C G A T C A A C T A C C A T C A A T G C A T A T A T T G A A G T A T T T G A T C A A A T T A C C T G G G G C
 A C T G G C G T G T A G A G A C T G G T A C T G A T G A T T G G C T G T A T C A G G C G C T G A A A T C A G A A
 A C C G C G G C T G G C G C T G G A G T C T T A A T A G G C C A G C A C C G A T G C C T G A T G C G A C G C T T G A C
 G C G T C T A T C A G G C C T A C G T A T T T C C T G C A A T T A T T G A A T T T G C A C A A A T T T G A G C T
 45 G G A T A A G G C G T T C A G C C G C A T C C G G C A T C T G G G C T G A T T G C C T G A C C G C T G T G T A T T
 T C C C C T C C G C G C C C C T C A T A C G C T G C C A C G T T T G T A C T C T C G C T T C T T T G T G C T C G A
 C T A T C G G T T G C G G A A A T C A G C G T C A C A C T G C T T C T G G C C C A C T T C C A C G C C T A T
 G C A C C A C T T T C C C T G G C A C A T C G C G A G T T C C G T A G C C A C T G G C G G A T A A A C T C G C C C T
 C A T G A T C A A A T T T C T G C C C T G G T T G T C G G G T T G A A A A T A C G A A A A T A C G C G C G T G C A T
 C G G T T C C G G T T G A A G C G G C C A C T G C C A G C A C C G T T A T T G G C T G C C A A A T C A C C A T C A A

TCAGCTGCGACATGAAATATCGCTCGCCT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 183>:

GNMCJ05F gnm_183

```

5   CCCAGCTACTTGGGAGGCTCAGGTGGGAGGATCACCTGAGCCAGGGAGGTTGAGGCTGCA
    GTGAGCCATTACTGTGCCACAGCACTCCAGCCTGGGTGACAGAGCGAGACCCCATTTAAA
    AAAAAAATAGTCTTTAAACTAATAATAATACCACTACCTTGCATCTGTAAGGGCCACCT
    TTTCCAAATTTCCCCTTCATATGCCAAGCTGTGTGAAGAAACAACCTTTTGAGATTTTTAG
    GGCAGCTACTATTGATTCCCACTTTACAGCAAACTCTGAAGCCAAGGCCAGGCGCGGTGACT
10  CACGCTGTAAATCCAGAACTTTGGGAGGCCAGGTTGGTGGATTACGAGGTCAGGAGAT
    CAGAGCCATCCTGGCCAAACATGGTGAACCAGTCTCTACTAAAAATGCAAAAAATAGCTG
    GCGCTGGTGGCAGATCGCTGTAATCCAGCTACTCGGGAGGCTGAGCAGGAGAATCCGCT
    TGAACCCAGGGAGTCAGAAGTTGCAGTGAGCCAAGGTCGTGCCACTGTACTCCAGCTGGC
15  CACAGAGCGAGACTCCGTCTAAGAAAAAATAAAATCTGAAGCCAAAAGAGAAAGGT
    CACATTTCCAAAATAAGCATAGAATTTTATCTCATCTTAAGCAAGAGACTCTGTGT
  
```

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 184>:

GNMCJ06R gnm_184

```

20  ATGGCTTGTACTACATTGTGAATATATAAAAAATCCATTGAATTGTAACCTTTAAATGGGT
    GAATTTTATGTCAATTAAAGCTATTTTTAAAAAAGACCTATATGAAAAACTTGAATTTT
    GGGGAGTTAGTTGTATTAAACAGGCCCTATCCAGTCTTTTTTCAAATTAGAGAT
  
```

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 185>:

GNMCJ07F gnm_185

```

25  CCGGAAGAAAGTGAACCTCTGAGTAGAGCAGGGGAACACCGAAGATGCTCCAGTGCAGATC
    AGGAAGGAGCAGGGGATGAAATGTTACAAATTTCTAGAATCAGAGAGCTGAAGGTAAATTA
    CTCTCTTTTCAAGTTGTGAACATGTTAACTGTGGTAAATACTTATAAGATGATAAATT
    ACCATCTAACCGTGTGGAAGTGTACAGTTCAGTTGTTGAAGTATATTCAATGTCATTTTT
30  TTTTTGTGTTTTTTTTTTGAGACGAGTCTCACTCTGTCAACAGGCTGGAGTGCAGTGGTG
    GGATCTTGGCTCACTGCAACCTCTGCCTCCTGGGTTCAAGCAGTTCTCCTGCCTCAGCCT
    CCCGAGTAGCTGGGACTACAGGCGTGCATACCATGCTCAGCTAATTTTGTATTGTTAG
    TAGAGACGGGGTTTCAACATGTTGCCAGGATGGTCTCCATCTCTTGACCTTGATTGTA
    CGCCTCGGCCTCCCAAAGTCTGGGATTACAGGCGTGAGGAACCGCATCTGG
  
```

35 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 186>:

GNMCJ09R gnm_186

```

40  CCAATGACAGGTCCTTTTTTCTGTCTGTATACAAGATTAGGGGAGTGTTTGGTGGGAATA
    GTCTGCTCTGATGAGGAGGCAGTCATTCTGGTGTTCCTGTTTGTCTGCGTAATGTGGGAAC
    ACATTTTGTCCAGCACTTCTGGATAAAACACAAACCAGGCTCGACAAACTCCCCAGT
    GCCACATCACTTGTTCATTTCAGAAAGATAGCTAGAGCGCGGGTGCACTGGCTCACACCT
    GTAATCCCAGCACTTTGGGAGGCCAGGAGGGTGGATCACCAGGTCAGGAGATTGAGACAT
    ATCGTGGCTAACATGGTAAACCTGTCTCTACTAAAAATACAAAAAATTAGTGGGGGT
    GGTCAATGTGCCTGTAGTCCCAGCTACTCAGAAGGCTGAGGCAGGAGAATGTTGTGAAC
  
```

CGGGGGGCGGACTTGCACTGAGCCAAGATCGCTCCACTACACTCTAGCCTGGGCGACAGA
 CGGAGACTCTGTCTCAAAAAAAAAAAGAAAGCCAACCTTCAATCACTTCAGCATCCGT
 GACAGTTCGAGCACATTGCAAGCATATAGCTGTTTGGGGCAATAATAGCAGTCTC
 AAAGCCATTGAGCAATACCTGCTTCCCTCT

5

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 187>:

GNMCJ09F gnm_187

CCGAATCCTAGCTAGATTGTCCGCCAACATATCTGAACCCCTGGCCTCTTGGAAAAAA
 AAGAGAGAGAGAGAGAATATAAAATGTACTATACAGGGTTAAATTGACACTTCCTCTCTTG
 10 AAGTATTAGAACTACTAATGGAAGATTGAAAGGGAAGCATGATTTCCTCCCTATGTGG
 CAATGTTGTTAATGCAATGCAGGACAGCTTCCAGTGCTTCAAGTCTTCCACCTCCTGA
 AACACTGATGTGGAGGGGGAACACAGGCCCTAAAGATCAGAGGCCTGAATTCGAGCCCC
 TGCCTCGCCACATACTTGCTGTGTCACTTGAACAAATTACACAGCCTCCGTGGGCTTTG
 GGGATAAATGTGAGAGCGCATAGAGAACTCATCTCCTCTGCTGACTGATTCTGATCCTTT
 15 GGTTCGACTGCTGAGCACCATGTTGATGAGCTCTGTGAGGCTCCATGGAGGGAATAATGC
 AGTCATCTATTGGTGATATCTGCTATGGACAACATGAGTTGGAATTTCTGCCAGCCAGAC
 TATGCTTCAAGGACTGTGAACAAGTGTCTTCTGAAGTCACTTCCAGATCAAAGGACTT
 GGTGACTCGTTTCCAATGGGACTGGAATACGAGAGGGACTTATATCATCATGTTATTTT
 CTAAGGCCCTGAAGATCT

20

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 188>:

GNMCJ10R gnm_188

CCGAGGCTGGTCTCGAACTCCAGACCTTGAATCCGCTGCCTCAGGCTCCCAAAGTGCT
 GGGATTACAGGCATTAGCCACCGTGCCTGGCTTTTGGTGCTCTCTCGTTTAGTCCACAC
 25 TCCTGGCCACTTCCAGGATGCAAACTGGCTCACAAGATTGGATTAGGACCCATTCCAA
 TCAATAATAATAACAACATTTGTTATTTTGGCTTCTGGATATTAATTTAATTACT
 TTGAACAACATAATTTACTACAGATGTTTAACAAGCACCCATTATTAATTGGCTAAACTG
 TGAATTTAGTTTAACTGTGCTGACCAACTATACAAAACATCAATTTTAATTTTGAC
 AAAAGGTAGTAGGCTGGGCATGTTGGCTTATGCCTGTAATCCAGCACTTTGGGAGGCCA
 30 AGATGAATGGATCACTTGAAGCTAGGGGTTTGAGACCACTGGAACAACATGGTGAACCT
 GTCTCTACTAAAAAAGAAAAATAGATGGCCATGATGGTGACACCCGTAATTTTCACT
 ACTTGAAGGCCGAAGCAGAAATTACTTGAACCCAGGAGGCAGGAGGTTGCAGTGA
 GCCAGATCATGCCACTGTACTCCAGCTGGGCTGAGCTACAGAGCAAGACTCTGTCTTA
 AAAAAAAGCAGCGAAAGT

35

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 189>:

GNMCJ10F gnm_189

CCGGTATTAGGAAAGAGACAAACCACTTTGCTCTGGGCTGGGAGGGAACAAACCGTCTC
 CCTCACTCCCTAAAAATCAAATTCAGAGGAGCTGTCAAGTGGACCCATGGAGCCCCAG
 40 CCAAGTTCAGAAACAAGGATTCAAGCCCTTCAACATAAAGTCACCACGAGGCTAGAAGA
 GACCAGATGAATGGGCTGGCCCTGGTACCTGAGTCAGAAAGTGGGAGTGCCTGGGCATTGG
 TCAATGGTCCATAATGGAGACAGTGAGCACAGGAGTTAAACAAGATGGCTTGGAGCCAG
 GTGCCCTGGGTTCAATCCAGCTGCGTAACTTTCAGCTGGCCTTTTCCAGTTCCTTACA
 CACTCTGTAACCTCACAAGATGAAGTGGGAAATGAAGACTACAGCACTACTGACTTCAGA
 45 GGATTGTTGGATTAAAGTTATTAATTCATTAGAACAACCTGGCACATAGTAAGTGTTC
 AGTAAATGTTTGTATTCCACACCCCTCCCTCCCTTGGCCCCGGATGGAGGAAGCAGGCT

AGGACCAGCCCTCGGAGCTGCAGCTGCCCTTCATCCCTCCCTGGCCCTCTCTAACGAGAT
CCTGCTCCAG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 190>:

5 **gnm_190**

AAATTTACTCAACCATTTCTGGAAGACAGCGTGGTGATTCTCTCAAGAATCTAGGACTAGAA
TTACCATTTGACCCAGCAATCCCATTTCTGGGTATGTACCCAAAGGATTATAAATCATGC
TACTATAAAGACACATGCACACGTATGTTTATTGTGGCACTATTCAATAGCAAAGACT
TGGAAACCAACCCAAATGTCTCCATGATGGACTGGATTAAGAAAAATGTGACACATATAC
10 ACCATGGAACTACTATGCAGCCCTAAAAAGGATGAGTTGCTGTCCTTTGCAGGGACATGG
ATGAAGCTGGAAACCACCATTTCTCAGCAACATATCACAAGGACAGAAAAACCAACACCCG
ATGTTCTCACTCATAGGTGGGAATTGAACAATGAGATCACTTGGGCACAGCAAGGGGAAC
ATCACACACCGGGGCTGTTGGGGGGTGGGGGAGGGGGTGGGGATAGCATTAGGAGATA
TACCTAATGTAAATGATGAGTTGATGGGTGCAGCAACCAACATGGCACATGATACCTTA
15 TGTATCAAACTGCACGTTGTGCACATGTACCTAGAACCTAAAGTATATTAAAAA
AAACCTTCCCTTTCTTGAATGTAAATTTGGTTCAACCATTTGGAAGACAGTGTAGCAGT
TCCTCAGAGATCTAGAACTAGAAATACCATTTGACCCAGCAATCCCATTTACGGGTATAT
ACCCAAAAATATATAAATCATTTCTGTCAAAAGATAAAATGCACACATGATCATTTGCAGCA
CTAATCAAAATAGTAAGACATGTAGTCAACCCAAATGCCATCAATAATAGACTGGATA
20 AAGAAAAATGTGGTACATATATACCATGGAATACTATGCAGCCATAAAATGAACAGAT
ATGTCCTTTGCAGGGACATGAATGGACCTGGAAGCCATTATCCTCAGCAAACTAACCGAG
GAACAGAAATGAACACCCCATGTTCTCACTTGTAAAGTGAAGCTGAACGATGAGATCA
CTGTGACACAGGGAGGGGAACAACACACATCGGTCCTATTGTGGGGTGGGTGGGGGA
GGGAGAGCATTAGGAAAAATATCTAATGCATGCTGGGCTTGATACCTAGGTGGTGGGTTG
25 ATAGGTACAGCAAAACCACCATGGTACACGTTTACCTATGTAAACAACTGCACATCCTGC
ACGTGTACCCAGAACTTAAAAATAAAAAATACCCCAAAACACACTCCTTAGGTATATGT
AACTATTTTCCCGGGTAC

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 191>:

30 **gnm_191**

GTAACCAAAATTCGAGGATTGTGTCTAGGACTTGAAGGCCATAGGCATTGCAACACCG
CCAACCTCCCTCCTTTTACTAATCGTAGTGCTTTATGGCCATAAAGCACTCTTTCTAAATC
TAATAATGATTTAGAAGAAGGAAAAGACCAATATGATGATAACAATGTGGGAGATTCTCT
35 TTATCTTTGTAGCCAAATGCACGTAAGGAAAAACAGACAGTATGCTGACCTCATCGTTTC
TCTAGGTGCGCAGTTTTTTCACTAAGATGTATATAAATGAAACCCCTTTGCTCTGCAGG
CTATTATACTATCCTTTTAAATTCAGCATCTTCCCTCCTCCGTTTCATGAGATTTGTG
GAAGAGACATCATTTGGGAGAGAGAGTTTATTGGTTACTGCTCACTGAGTAAGCAGTAA
GCCCAAGTGGCAGAAAAACCATTCAAACTGGCTTGAAGCAAAAAGGGAATTATTGGAAC
ATGTAATTTGAATAGTTTTAGGTGTAGGGCTGACTCAGACGCAAGCTGGATCCAGAGAGCTC
40 AAATGATGCCATCAGAAACATCTTTGGCTCTTTGCTCTATATGCTGAAAAACCTGAATT
GTGCACTTTATTTATGTAATTTTTTTTTTTTGTAGACAGAGTTTCACTCTTGTGCCGAC
GCTGGAGTCAATGGCCCCATCTCGGCTCACTGCAACCTCCACCTCCAGGTTCAAGTGA
TTCTCTGTCTCAGCCTCCCAAGTAGCTGGGATTACAGGTGCATGCCACACGCTGGCT
ACTTTTGTATTTTTAGTAGAGACAGAGTTTCATCATATTGGTCAGGCTGGCTCTCAACT
45 CCTGACCTCAGGTGATCCGCCCTGCTTGGCTTCCCAAAGTGTCTGGGATTACAGGTGTGAG
CCACTGCACCCGGCCCAATTGTGTACTTTAAATGGGTGAATTGTAAAGGTGGGGAATTAT
ATCTCAACAGAGCTGCCCCCATTTCCCAAAAAAGGACCAAGAGGTGAGGAAGTGGAGAC
AATAT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 192>:

gnm_192

CATGTCAAAATCCTAATCTCCAAGGTAATGGTATTAGAAGGTAAATCTTTGGTAGGTGAT
 5 CAGGTCATAGAGGGTGGAGCCCTCATGAATGGGATAGTACCCTTATAAAAGAGAACCCAG
 AGAGCTCATTGTCTGCTTCTGCCATGTGAAGATACAGTGAAGAAAGAACGAGGCCCTTGC
 CAGATACGAGTTTGCCAAATGCCTTGATCTTGAATTTCCAGCCTCCAGAACCTGTGAGCAG
 TAAGTTTCTATTGTTTATAAGCTACCCAGCCTATGGCATTTTGTTACGGCAGCCTGAATG
 GACTAAGACAGCTTACCTAGACCATTTATTTCCCTTTTCATCATCCACCAGCCAATTCCAGC
 10 ACATCTCTTTAGATCTCAGCTTAAATACTCCCTCCAAGACCTCCCTCTATCTCTAATATGA
 ATGAAATCCATATCTCAAGTTCTTCACAGAATCCTCTACTCTTTCCCTCATGGCATTGT
 CATAAATTTGTAATTATATATCTAGCAAAGTTCTTTGTGTTAAACATCTACCTCTCCAC
 TCTCTAGAACTCCACAAGGACATCCCTGCACCCAGTGCCTAGGCAATGCCAGACACAT
 AGCAGATGCTCCATTAATTATCTGTCGAATGACTGAATGGCTTCCAAGTTAGTTAACTGG
 15 GCACCCCTTGATAACAGATTTCTGGCCTATTGAGGATCAAAGAGAAGTGGTGCTACCT
 TCTCCCTGCCACTATCTTGCCCACTTTGGTGCCAGTTCAGGAGTTTGGAAATGGATGT
 GGCATATGATAGACGTAGACCTATTGCCCTTTCTTGGATCATAAATCTGCCAGGCTCTGAG
 TCCATGTGGCATCGATGGCTAATTGTCCTCCAAAATTTATCCTCTCTCTCCATTATTA
 CCTCCCTCCTGGAGTTTAAACAGGGCATGTGTACACCTACTGGGATCTCATTCTCAGCT
 20 TCCCTTGCACACTGGATGTGGCCTTGTGACTAAATTTCTCATGAACGAATGTGAGTCGAAG
 TGATGTGTCAGTATCTTCATCACTTTCCCTAAAAAGGGAACGTGCTGGTCTCCACTTCTCT
 TCTTTCAACCTTCCAATGAGCCAGAACATGCAATGTGATGCTGGTGAGTCAGCTTCAGTCA
 CATGAATAAAAACAACTCCAGGAGATGACTAAGCAATAAGACAGAAAGAACCCAGTCC
 CTAGACGAGTTACAGAAACCAAGCTACCTATCCAACCTTGGGCCACCTGGATTATATGA
 25 TGAGAAAAACATAAGTCCATATCATTTTTTGAAGCACTGGATTTAGGGCTCTTTGTG
 ACAGCCGCTACCTCTAGTCTAATCAATATACCTCACCACGCTCTCTGCTCTAAGGGA
 GACARAAGAACAAATGAGTCTCAAAACATCATCAAATGGAATAGATACAGACCTGTAA
 TCCCAACACTGTGGGTGCCAAGCGGGTGGATCACTTGAGGTGAGGAGTTTGAGACCAA
 CCTGGCCAACATGGCAAACCTGTCTCCACTAAAAATACAAAATTAGCCGGGACGTGGT
 30 GTTGTGCACCTGTAAATCCCACTTACCACAGAGGCTAAGCCGGGGAATTTGCTGAACCCA
 GGAGGGGGAGGTGTCAGTGAGCCGAGATCATGCCACTGCATCCAGCCTGGGTAAACAGAG
 TGAGACTCTGTCTCAAAAAATAAATAAAAAATAAATAAGACCATTAATTAATAGA
 TATAGCCTTTGGTCTGTGACCAAAGCTCAGAATGTTATGATATTCCTTTCCATATGTCACCT
 CAACTTGGCCCTGTCTAGACAGGACAAATGCCCACTGGTCCCTTGCACTCAGAGCTG
 35 TTACATTTGAATGGAGCTTAGCCTTCCCTGCCCTGGTTCTCCTTAGACTCATTGGG
 AAAACAGGAAACGTAATTATTCTGCCATTACCTTTATCTCATGGAGCCTGACAGAGTGT
 AACCAATGGTAGGAATTAACACACTCAATTGCCAATCAACAACCTCCCGAAATAAAT
 CATTTTAACTCATTATACATATTAATATGACATGCTTAATGTCCAACCTCAATAGATT
 CAGTACTCAGGAATCCCTTATACAGGTAGACACGGGTAC

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 193>:

gnm_193

CTTAGATTAAATGGGCAAAAAAGTTACAATCATGGGATGTTTGCCCTCCCTATAAAGACTA
 ATGTTTCATAGATTGTTTTTCAAAAATGAGGACTCCCACTAAATGGGTCCAGCTACACAC
 45 ATGGTCCCTGCAACACGACTCAGATAAGGGGAGCTGAAGGCTAACTCTTAACACTTTTC
 TCAGTTCTATAAATTTCTTCTAAGGGAGTAGAGGAAGTCACACCCAGGCCAGAACTAC
 ATTCCACTGATCTCAAAATTTTAGACAAGGCTTCTCCTCAAGCCAATCAACAATCAAG
 ACATCTTTAAATCTACCTTTGACCATGGGTCCCACTTTGAGACGCTCTGCCCTTTTATG
 50 GTCAACCAATCTAGAGCCTCCCATATATTGATTTATAACTTTGTCATGTAACCTCTGCCT
 TCTTGAATTAACAATCCTTACCTATAAGCCATCTCGGGAGCTTGGGACTTAAGCAATTAC

-660-

TAATTATCTTTGCTTGGTGGCCCTCCAATAAATACCCCACTTCCTCTTGTCTACAATCCCA
 ATATCAATGTTTGGTTTGTGCTGGGCAGGGGACCCAAGTTAGGTTTCAGTATCAGC
 AAGAAGGC AAGACAGAGTGTGCTAGCAGAGCAGAAAGTCGGGTGTTTGGTAACCTAAT
 CTCAAATCGAAATGCCATCACCCTTTGCTGTGTTCTACTGATTAAAGCTAGTACCCATA
 TGTTCATTGTCAGCACTATTACAAAAGCAAAGACATTGAATCAACCTAGGTGCCCATCAA
 TGGAGAATTGGAAAAGAAAATGGTACATATATACCATGGAATACTACACATCCATAA
 AAAGGAACAAAATCATACCCTTTGCA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 194>:

gnm₁₉₄

CCCTTTTCTCGGTGGAAATGTGCTTCTCCTTCATACATGATATAACTTGATTGAAACAATG
 TCACAAAGATATTTTCTCTGTAGATTAAAATTTTGTTCATGAATTTTCAATAGCTT
 TAAGCAGTTGAATAGCAATATATGCAGGAAGAGCTGAGAGACTTATGTAATAGATATTT
 CATGTACTCTATAACCCCACTGCTGCCAGGAAATGTGCGCTGCATTAATAGAGAGGATT
 TTTTCTGCTGAATACCTTGAGGAGTTGGCCAAACAGCTTTGGGAGTAGAAGTAGAAAGGG
 CAGGTGTGATGGCTCATGCCCTGTAATCCAGCACTCTGGGAGGCCAAGTGGGAGGATT
 GCTTAAGCCAGGACTTTGAGGCCAGCCTGGGCAACAGAGTGAGACTCCATCTCTAAAGA
 AAAAAATCATAAATTAATAAATTTCTGCCCCAAATGGACACAGAAAAATGACAATG
 CAGAGAAGATATAATGCAATGAAGCTAGACATGGCCMAATAGAAAAATGATATTGAGAG
 AGAACAGAGCAAGAAAGAGSAGCCCTCAGCATTGAGAGGGCTGAGGAAGCACAGAAATG
 ACTGATGGGTGGTGTAGTTAGTTTACTTTTGTGAAGTGTGCAATGTAATTTCACTTTGG
 TCTCCCCACCGGAATCATCACTAAAGCTACACTGCTATATCGGCTATCTATTGCTGTG
 TACAAAATTTATCCAAATCAGTGGCTTAAACAACACATTTATTATCTCAGAGTTCTGT
 GGGTTAGGGATTGGAAGATGGGCCCTGCTTCA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 195>:

GNMCJ15R gnm₁₉₅

CCAAACCAATGTACAGTATCTCATGTACACAGTCTTCTAAGGATTGACACTGAGGTTGC
 TTCTGGATTTTTCGAATTACAGATAGTGTGGATACAAATCTTTGCAAAATATACCTTGCA
 CGCATGCATGAGAATATCTGGAGAATAAATCTCAGGGTCTAATTGTGGGCTTATTAAA
 TTTTGCATAAAAAATTGATACATGTTTTCTAACCACTGCTCCTCCCAAGAGGTTGCACC
 AGCTTACAGTCCCAACCAATCAGGGAAGAGGGATTATTTTATTTTATTTTATTTTGGG
 ACAGGGTCCGGTCTGCCACCCAGGCTAGAATACAGTGGCGTGATCATGGCTCATGGCAA
 CTTGGTCTTCCCAAGTTCAAGCAATCTCCGCGCTCAGCCTCCCAAGTAGCTGGGATGAT
 AGCCGCGATGCCACACACCCAGCTAATTTATATTTTACTTTTGTAGAGACAGAGTCTCA
 CTATGTTGGCTAGGTGGATCTTGAATTCCTGAGCTCAAGCGATCTCCCACTTTAGCCCTC
 CCAAGGCTCTGGGATGACAGGTGTGAGCCACCATGCCCTGGCTGAGAATTGTCTTCTCAC
 ACCCTTGTTAATAGCATATTATCACATTTTAA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 196>:

GNMCJ16R gnm₁₉₆

GTACCCGTTTCTTTTGGTGCCAATCTTGAGCGCGCGTAAACCACTTCTCCGCGCTCTTC
 ATAGACCTTCAGCCACCTGGCTACAGAACCCTACCAGCAAGCATAAAGTGAGCAGCAGC
 CTGATTAAGGGACATGTGCTGCTGATCAGAGCTTTCACAGCTTAAATCAAGCAACTCTGG
 ATCAGCACTAACGCCCTTAGGTTTGGGAATTAACCTTTTTCTCCATGTTTTTCATAGAG
 GGCAACCCATGTCTGACCTGGGTCGGGGGACACCAAAACGTGCCGAGATGATCCTGTA

ACCATCATCAGTTGTGAAGTAGTGATTACGACTTCAAGGCGCTTTTCAAAGGGTATTT
 TGGCTTTGACATATTAGGGGCTATTCCATTTCATCGTCCAACAAAATGGGTGCAGTACAC
 TGGAGGGCTATCAGTACACTACCTTTACGCCGCCACCCCTCGCGTCTCGGAAGCCTTAAT
 5 GAGCGCCCTGGCGAGACCCGCGAGCAAGGCTACGCCCTGGACAGCGAAGAGAACGAGCAG
 GCGCGCGCTGCGTGGCGGTGCGCGTGTGGAACACGAGTCCCGCGTCACTCGCCGCCCTGA
 GCCTGTCGACGCTGACCTCCGCGTGGACGACGCGGAGCTGGCTAATTTACGCGAGCAGC
 TTCACGAGGCGGGCTCGCGCTCTC

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 197>:

10 **GNMCJ16F gnm_197**

CCTGGAICTAGGCGTACGTCAACTATTCCGCCAGCAGCAGCGTCGAGCCGGTTGAGGTGC
 TCACCACCATTCAAATTTCTGTTCTGCGTGGTGCGGTGGTGCTCTACGGGGCATGTTCA
 TCATGCTGTCGCTCTACAAGCTCACCGATGCCCGGTGGAGGCCATCAGCCGGCAGCTGA
 15 TTAAAGCAGCGCGCGCGCAGGGCGAGGCCGTTCCCGACGCCGCGACAGCGCATCCCATTA
 ACCGGAGGCAATATGGAATCACTAACCCGATCTCACCGGCTTCAACCCGGACCCGCTCC
 CTGTGCGCGCAGGCGGAGGACTACTACATCGCCACCTCGACCTTCGAGTGGTTCCCGGGC
 GTGCGCATCTACCACCTCCGTGACCTGAAAACTGGTGGTGGTTCGACACCCGTTGGAC
 CGCGTGTGATGCTGGACATGAAGGCAACCCGGACTCCGGCGGCATCTGGCGCGCTGC
 20 CTGAGCTACGCCGAGCGTAAATTTCTGGTGTCTACACGACGTGAAGATTGTGCGACTCG
 CCGTGGAAAAACGGCGCAACTTCTCGTCAACGCGCCCTCCATCGAGGGG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 198>:

GNMCJ17R gnm_198

GTACCGCGGATATTGTTGGTTAATGCTGGTGTTCGTAAGTGAACCAAGTGGCCATGT
 25 CTGAAACTTAATAAAATCGCTGATCGACTTGGCGTACGATTGCACAATCACCAGTACGCC
 AAACATGGCGGGCGTCACTCCCTTTACCGGCACACGAGAGCGCCACAGACCCAGCAAGCG
 GCTCAGCAGATTACTGGAGCCTAACCGAGCGCTATTGCGAATAATGGTGCAGAACCGGCC
 ATCTGCAAAACCAATGTTTATGTTAAACCCGCCAATTCAGCCTGACCTTATCGTTGATA
 GTAAAAAGTATCCCGCCAGCCTTAAAGTTAACTTCGGCGGTGAGAAACGATGGCAACAG
 30 AGAAACCGCCTTCTGTGCTGTTCCAGCACTTCGCTGTAGGGCGCTCTGGAATCAATCTC
 AAGAAATTTTGTGCCGTTATAGCCAATCTTGACATGACACCGATTGTCCTGAGCTG
 GGCATAGTCATGGTCAGGCTTCGGGAGATGGCAGTCTCAATATCAATGCCACGCGAAT
 AATTAATTTCCGGGCGATATTGCGCCATTTGTTGATATAAACGCCGTTTCGCGCTGCGCCAG
 35 AAACATGCTGATTTTCCCGGTGCGCAGTACGACGCCAATCCCGGTCCATCATAATAAA
 GCCCGAAATTTGAGCCTCGGGGAGCGATCGCTGACCA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 199>:

GNMCJ17F gnm_199

CCGGATTTTCCCATCAACGGTAATTTTGTCACTGCACGACCGACATTTCCGGCGCTTTT
 40 CCTAAATGAACCTCTTTCGGCAGCACCATATTTTCGACAACGGTAATAAGAGTGTTCACAC
 ACCGTTGACTTGCTGGAACCATCGCTACCAATAACGGCAATTAATGGAGGTGTTATGAC
 TGCATGAATATATCCTTTAATTTAAATATCCATTAAAAATATTTATTTGGTTAATATGTT
 TTTATGAAAGCGTAATTCAGGTCAATGTCAATTAACCATTTGCACAAATAGGTTTGAAC
 GGATATTTCTGAGCACGAGCACGTAATATTCATACATTATTTACTGCCGGGTTTTCGT
 45 GAATCAACGTAATATGTCATAATTAATTCACGCCAGCGCTGTTATTGCCATTGTAGGA
 TGTGATGGTTTCAGTAAATCGACCTTCACGGCAAGCCTGGTAAATGAAGTGGCAGCAAGA

ATGCCAACAGAACACATTTATCTCGGGCAATCGTCCGGGCGAATTGGCGAATGGATTTCA
 CAGCTCCCTGTTATTGGCGCACCTTTTGGCGTTATCTGCGAAGTAAAGCGGCACATGTG
 CACGAAAAGCCCTCAACACCGCCTGGCAATATTACTGCCTGTTATCTATCTGCTTTCC
 TGCTGGCGGCGTACAAGTTTCGCAAAATGTTGTAAAAGCCAGCAGGCTTTCTGCTC
 5 ATCACCAGACCCTACCCGAAGTTGAAATGCCGGG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 200>:

gnm_200

GTACCGGCGCTACCTGGCTCAAGTCCGAGCTGTGAACACTGTACGATCGCACTGACAAAA
 10 CTCATAGTGTCAAGTTTCTTAACGCCGGAACTTTACGAATTTCTGTGGTGGCGATACGG
 ATCATACGTTTCAAGCGCTCATATGGCTGGGAAGAGCTGCTGCCAGTTGCTCTTTTATTGAT
 GGCTGGTTAATAAACTAATCACGTCCGCTATTTTAACTGCTGCTGGTGCACGGTTTCC
 TGAGTTTTTTGCAGATCGGCTTTTGCATTGGTGGTTGCTTAGTCATTTGCATATTCCTT
 AGCCAGCGGGGCGAGTGATAATGTCTTAATAGCTGGCCATTATCGGTATTCAGGACGTC
 15 AGACAGGGTTCGCAGATTGCGGTGATATTCCTGTTGACCTGCCAGTWTGCTTCTTCGCC
 CATCATGAAATTTCAACCGGATACGCTCCGCACTTAATAGTTGTGCTGGCAACCGAAAA
 AACGGAAGTTGGCTGCATCCAACTGTGCTTATAACCGTCACTGTAGAATGCATCCTGT
 AACGTCATGACGGTAGTCGTAATAAGCGGTTTTGAAATCGTTGAATATCCGCGTAGTTTT
 CACGTCCATGATCCAGTGAAATTCAGGGATAATTTGTCCGACGGCACCACACAAAAT
 20 TCCTGTTTCAGGATCTCCCACTAAATGATGATTACGCGTGTCCGGCGCTTTCAACAAG
 CCATTGCCCCAGCGGCAAGCCATAACGCTTTGATACATGAGTACAATTTTCCGGCCTTC
 TTCGCGAGTGATAACCGTTTTTCTGTGCTTGGCGATTCCATCAGAAACGCTTTCTCTTC
 TTCTTTTCCGGCGTTTGTACGCGGTTAAATTCAGGTGCTACGATAAAGCGGTTACTGAA
 TTCTTCGGG

25

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 201>:

gnm_201

CTGCACGAAATTTCTGTGTTAATGACCTGCCCGCTGAAGTGAGATCGATTTTACCT
 GGAGTGAACGCTATCAACTCAGCAAAGACTCCATGACATGGGAACATAAACCGGGAGCAG
 30 CACGAGAACCGCTCACTATCAAGGCAATACCAAGCTCAACGGCGAAGACATGACTGAGA
 TTGAGGAAGATATGCTACTCCCAATTTCTGGCCAGGAAC TGCCCATTCGTTGGCTTGCTC
 AACACGGGCAGCGAAAAACCGGTAAACGACGTTTCAACGCGACGAGCTCAGGCGATTACACA
 TTGCTCGGGCTGAAGAACTACCGGCTGTTACTGCCCTGGCTGTTTTCCACAAAACGAGCC
 TGCCTGACCCGCTGGAATTCGCGAACTCCACAACTGGTTGCTGACATGACAAAGTTT
 35 TCCTTAATCTGGTAATTCAAACCTGGGACTGATACTGCTTTTTTCCGAACATCACTGA
 ACGCTGACTACCCGATCGAGGACTGCTGACAAAAGAGTGGATGAAGGTAATCGTGT
 CACACATCACTCGCAGCGCTTCCGGTGCTAATGTGGCGGCGGAACCTCACCGATCGGG
 GCGAAGGTTTCGTACACGATCTGACGTCACCTGGCGCGCAGCTAGCCATCGGCGTACTCG
 CCGGTTCAATGGATCTGGACATCTATAACCTTCATCCGCGCACAGCTAAACGCAATTGAGG
 40 AAATGATCGCTGAAAAATAAACCGCCCTTTTCTGTTTTCCGCGACAAATTCATCACCATC
 CTGGCGGGCTGGATTATTCGCCGCGCATCGTGGTTGCGTCCGTAANAAGACACCAATTG
 GGATCGAGGTCAATCCCGCGCAGCTCACTGAATATCTGAACAAAGTACTGACTGAAACCG
 ATCATGCCAACCCCTGATCCGGAATCTGGATATTGCTCGCGGTCCGCTCCTTCGCCCCGA
 TGCCGCGAGCGAGTAACAGAAAGAGGAAACAGAGATGATGAAGAAAAACCGCAACCATCTG
 45 GAACACAGCGCAGTTGAACAGGGAGAGGCTGAACAAATGGAACCGGACCGCACTGAACATC
 ATCAGGACACGCGAGCCGCTGGATGCTCAGTCACAGGTAAATTTCTGTTGATGCGAATATC
 AGGAACCTCGGGCAGAACTCCATGAAGCCCGGAAAAACATTCATCAGGAAATCTGTGCG
 ATGACG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 202>:

gnm_202

```

5  CCGTGTTCGCATCAAATGACTGGCCTGTTCAAGGACCCATTGACCCAGCAATGTGTGGTT
   ATTATGAACCCAGAGGCAGAACGAGCTTCTCTCTTTTACCTAGGGGCGTGGGAGTATTT
   CAAGTGTCTCCGATTTTTATAACCCGAGTCTCTAGAATTAAACCCGACCCCACTGCCA
   TTTACTCTCTCAATGTAGAGTTGCTTTGAGTAGGTAACAGCTTAAATTCTTAGAAAGCTG
   AGCCCTCAGAGAAATTTCTAAGGTCAAGCACTATTGCAACTTTTTATTTCGCTAAAA
   ATGTAGAGAGGGAGAGTCAAGAATAACACTGCTAAAGGGAATTTTATTTTATTTAT
10  TTGTTTATTTATGAATGGAGTCTCGTTCTGTCGTCACGGCTAAAGTGCAGTGGCGTGAT
   CTCAGCTCACTGCAACCTCCTTCTCCAGATTCAATTGATTCTCCTGCCTCAGCCTCTTG
   AGTAGCTGGGATTACAGGCACATGCCACCATGCCTGGCTAATTTTTATATTTTATAGAGA
   GACGAGGTTTCACCATGTTGGCCAGGCTGGTCTTGAACCTCTTGACCTCAGGTGATCTGCC
   TTGCCTCAGCCTCCCAAAGTGCTGGTATTACAGGTGTGAGACACCGACCCAGCCTAAAA
15  AGGAATTTAATATGGACAAGAGTACGATCCACAAGGAGAGACAACCTTTATGAGCCCTT
   TTGAGCACAGCATAACTGTCTCAAAATATAGAATGTGCCGGCTGCCGTGGCCCATGCC
   AGTAATCCCAAGCACTTTGGGAGGCCAAGCGGGAGGATCACTTGAGCCCAAGTGAAG
   ACCAGCTGGGCAACATAGTGAACCTCATCTCTACAAAAAATTTAAAAATTAGCCAGG
   TGTAGTGTGTGTGCTCAGGTCTCAGCTACTTGGGAGGCTGAGTGGGAGGATCACTTG
20  AGCCCAAGGAGTCAAGGCTGCAATAGCCATGATCACACCACTGCACCCCAAGCTTGGGT
   AAGAGTGTAGACTGTGTCTTTGGCCGGCGCAGTGGCTCAGCCTCTACTCCAGCACTTT
   GGGAGCTGAGGCGGTGGATCATGTGAGTCAAGTGTCAAGACCAAGCTGGCCACAT
   GGGGAAACCCGCTCTCTACTAAAAATACwTAAATTAGCTGGATGTGCACATGCCTGTAAT
   CCCAGCTACTCAGGAGGCTGAGGAGGAGTATCACTTGAACCCGGAGGCTGAAGTGA
25  GTGAGCTGAGATTGTGCCACTGCACCTCCAGCCTGGGTGACAGAGCGAGACTCCATCTCAA
   AAAAAATAAAATAA

```

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 203>:

gnm_203

```

30  CCCAGTCTGAGTATTTAAATGTTTCATTTCTGTGCTGAGAGACAGAATTAGCACTTGA
   TAAGGTTGCATAAAATGCCTGGCACAACAGGAGATGCTCAGAAAGCATTATCCTTTCAAC
   CAGCTTTCATTAACCTCTTCATAAAAAAGTTGCAGACACCTCTCCTCACATGCACAGAGA
   ATATGGGACTATTCAAAGAGATGGACCAGCCACCTCCCTTCCCTCCCTGGGTGTTTTGCT
   GCTCAGAGAAATTCATGCTTAGATCACATCTTGGGAAAGGGCTCCAAGGCCAGAGCTC
35  ATGCGCTTGCCTGTGGATGTGGAGGATTTCTCATGTTAAAGTTGAGGAGCTGATCTCT
   CTCAGAAACCGCTGGGCCAGCTCAGGTGTGATGTCTAGACCATGTCCAGCTGCTTGGT
   GGCCTTGTCTAGCTGATAAACAGCCCAATCTAGTGGTGGACAGGACGAGAATTATCAG
   TGAGGAGGGTGGAAAGTGCCCCAGTGTGGCCCCACCTGGTGGCTGCACCTGTGCCCATC
   ATGGACACTTGGATACACCTCTCTGTTCTCATTGTCACTTGATGTCTTTTTTCTTTTCTT
40  TTTTTTTTTTTTTTTTGTAGATGGAGTCTCACTCTGTGCCCCAGGCTGGAGTGACATG
   GATCTCACTTCACTGCACCTCCACCTCTCAGTTCACAGCAATTTCTCTGCTCAGCCTC
   CGGAGTAGCTGGGACTACAGGTGCCCAACCAACCGCTTGGCTAAATTTTGTATTTTGT
   AGATATGGGGATTACCATGTTGTCACGGGTGGTCTGAACTCCAGCATCAAGTATGAC
   ACCCGGCTCTGGGCTCCCAAAGTGTGGGATTACAGGCGTAACGACCATGCTGGGCTCAT
45  TGTCACTTGATTCTTAGTGTCTGTAACGTCTACTTTAGTTTCTCTCAACCTAACTAT
   TCTTTAGGAAAGAAATTTTATTAATATCTGAGAACTGGGCTTTTAAAGCTTAATCTT
   TGCACATTTATTTCTAGATTTGTTATATGAGGTCAGAGAATGTGGTCCACAACTTTCT
   GCGTTGAAGAA

```

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 204>:

gnm_204

CCCTGGAATAGCATAGTTAGGAGTGTGGGCCCAAACCTGGATTGGAATCCTAGTTCATCA
 5 TCTAGTGTGTGGCTTGAGACAATTTGATAAAATTTCTTGTGCCTCAGTTTCCCTTTATA
 TGAATAATGGTTAACAACTGTGAGATTAAATTTGTCACACATGAAATTCGCTAAGAC
 TGTGCCCAACACACAGTAAATGCCCATGAATAGCCTTTCTCATTATTTATTTTTTTTTT
 GGAGACAGAGTCTCACTCTGTTACCCAGGCTGGAGTGCAGTGGTGAATCTCAGCTCACT
 10 GCAACTCCCGCCTCCAGGTTCAAGCGATTCTCCTGCCTCAGCCTTCCAAAGTAGCTGGAA
 TTAACAGCGGTGCACCACCATCCAGCTCAATTTTCTATTTTAGTAGACTAGTGGTTTT
 GCCATGTTGGCCGGGCTGGGCTGGAACCTCCTGGCCTTAAGCGATCCTCCTACCTTGGCCT
 CCCAAAGTGTGGGATTACAGGATAAGCCACCATGCCAGCCTATGAAAAGCCTTTTGTA
 ATCTTACGTTTGCTTCTTTGTTTGTGTTTGTGTTTGTGTTTGGATGGAGTCTCACTCTGT
 15 TGCCAGGCTGGAGTGCAGTGGCTCAATCTGGCTTATCACAACTCAGCCTCCCGGGT
 CAAGTGATCCTCCTGCCTCAGCCTCTGAGTAGCTGGACTACAGGTATGCCACCACATG
 CCTAGCTAATTTCTTTGTAATTTTGTAGTAGGACAGGGTTTCACTATGTTGGCCAGGCTGG
 TCCCGAACCTCCTGACTTCATGATCCGCCACCTTGGCCTCTCAAGTCTTGGAATTTAG
 GCATGAGCCACCGCCCGGCTGTAATCTTATAAAGAGATGGATGGATGGATGGATGGA
 20 TGGATGGATGGATAAATTAATAACAAATAAAATACTTAGACTGAAAGAAATATATCCAAA
 AGTACCCATTGGTGTATCTTTAGGGAAGAGAGTGGTTATGGGAGTCTTTCACCTTTAACT
 AACTGGGTATCCCTGATATGAGGCCCAAGACCCCTATTTCTTATCGATCATAGTACTCA
 TCATATTAGAATTGTTTATTAAATATTGGCGTTTCCACACTACCTAGTTCCTCGCCCATG
 TCCCTGGTATCTGTCGG

25 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 205>:

gnm_205

CCAACTAAATGTTTGTAGCTGCTGCATCTGGGGTCTTTTGTATAGCAGCTCAGCC
 TATATCCTTAATATACCATGCTCCATCAAAGTGGGAAATGAAGAAGACAAAATAGC
 30 TTATATCATGTTCAAGAAAACCTGGACAGAACCTTTTCTTGCAGAAAGCAAGACTAT
 CTCTACTCCAGCCCACCTTCTCCAACTTACCTGGCCCTGAGTTTGCAGATCCCTGAGCAC
 TGAGATGGGAAACATATAGATGGGTCTCAGGTACACACTGCAGGCTGGGATGGTGAAG
 CAACATTCGGGAAATTCAGATAGGCCAGGACTCTGTGGGACAGGTATCCGTCACACAGT
 GGGAGCTTCAGTTGAAGACAGACAGGAAAAGATCACAAATGACAGATTCTCCTACAAGCAC
 35 TACTGTACTAGTAAAGTCCCAAGGGGACAGGTAGGGATGGACAGGGGTGTTAGGACTTT
 GTACTTGGAAAGTGGGAGGTTCTCTTTTCTTTTCTTTTCTTTTCTTTTCTTTTCTTTT
 GAAACAGGGTCTTGCTCTGTTGCGGATCACGGCTCACTGCAGCCTCAATCTCCCGAGCC
 CAAGTGATCTTCCAACCTCAGCCACCCCAAGCAGCTGGGATCACAGGTGCATGCCACACAC
 CCCAGCTAATTTTTGTAGAGATGGGCTCTCACTATGTTGCCCAAGGCTGGTCTCAAACCT
 40 CTGCGGCTCAAGCAATCCTCCACCTCTGGCTCCCAAGTGTGGGATTACAGGAGTGAAC
 TGCTGCACCCAGCCTGAAGTAAAAAATTTCTTAACAGGCACAGTGATAGGATAGTTTCC
 AATTCATAGGAATCTG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 206>:

GNMCJ23R gnm_206

45 AACTCTACAAAAAATACAAAAATAGCCAAATATGGTGCCACATGCCTGTAGTCCTAGC
 TACTTGGGAAACTGAGGCAGGAGGATCACTTGAACCTGGGAGTTCAAGGTGGCAGTAGT
 TATGATGGAGTCACTGCATTTCAAGCCTGGGTGACAGAGTGAGACTCTATCTCAAACCAA

ATTTTAAAAAGTATCTATATGTAATATAAAAACCAAGTGGGCGGGCAGATGGCTC
 ACGCCAGTAATCTTAGCACTTTAGGAGGCGAGATGGGTGGATTACTTGAGGTTAGGAGT
 TCGAAACGAGCCTGGCCACCTAAAAAAATTTTAAAAAATACAAAAAAAACCCCAA
 AAAACCCACTAAAAATACAAAAAAAATTTAGCCGTGCATGGTGGGGGTGCGTG
 5 TAATCCTAGCTACTCGGGAGGCTGACGCGAGGAACTGCTTGAACCTGGGAGGGCGAGGT
 TGCAGTGAGCTGAGATTACACCACCTGTACTACAGCTAGGTGACAGAGTGACACTGTCTC
 AAAAAAFAACAAAAAAAACACAAGTGAAGCTCATCTATACATGCTGCTCTGTTTA
 TATATATAGCTAAGATATATATATGTATAAACTATATATATAGTT

10 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 207>:

GNMCJ23F gnm_207

CCAGCCAACAGAGAAAAGCTGGGACAAGAGACAAATGACATCATTTGCACCCCTAGATCG
 AGCCATGCGCTGAAGTCCCTCTCTGAACCTTCCAGTTACCTGAACAAAAATTCCTTTTA
 TTGCATAAGCCAGTTTCAGTTTCAGTTCTGTTGCTTCAACCAANTATCAACCTGATATA
 15 ATTGGCTTCATGTTTGTCTATTCCTCTCCACCATGAGATTATAAGGTCTTATAAAATTA
 ATAGGAATTTCTAAATCTTCAGATAGAAAATTTAGCTATCTGAGAATGACACACAGCAA
 GTACTCAATGAACCTTTTTTTTTTTTGAATGAACGAAGACAATAAGAGCAAAAAAGGT
 AGAGGGAATAAAGAGGAGAGAGAGGAGAGAAAACAATGTCCAGATCATGTTTGAAGCA
 GGGCCACCTGCGAGGCCAAAAGCTCACACATGCCAGGAGAAACGCTCTACTGCTCCCTC
 20 AACTCTGATTCCTCGGAGCTGGCAGCCGCAAGCCAGGCCAGATGGGACCTGCCTC
 ACTGACACTCATTACGGCTTGGGTTGCTTTGGCTTGGTTTATAGATAACAGGAAAAGCGA
 GAAGGTCTGTCTCAATGTCTGTGTGATACTCAGAATTGAATCCTGGATCTCAAGGGGT
 TAACCTCTAAGGCATCTCCACTCTGCCTCTGGTTCTTGAAGAAACCCAGTGGGAGAG
 AA

25

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 208>:

gnm_208

CATGACAACTCACCAGCCTGTATTCACCCGAATGTAAGCTTCTGTGGGCGAGGAGCTCA
 TCTGTCTTGTTGCTGCCATGTTGCTACTGCCAAGCAGTCCCCAGTAGGCTGGTCATGGC
 30 TGGTGTCCAGCAACATATTTGTGCGAGCATATGGGTGAACATACACAGCTCCTTTCTGAAA
 CAAAATTTGAACCTCAGTAGGACACTCACTCAGGCAAGATTGGGAAGCTTTAGATCCATTC
 TGGAGGAGGGGAGATAGATACAGAATATATTCATTTAAACAACATTTATGGGGAACCTA
 CTTTTTTGGCGAGCCTCATGCTACAGAAAACACAGTACACAAGCCCTGCTTTCATGAAG
 CTTACAGCTCTACCGGGGACTGGGAGAGGCGGACCATAAACACACACATGACACATATAC
 35 ATGTTACATCTCACACACCCTGATCAGATAGTGATAAATATTATGGAGCAAGAAATC
 TGGAGGAAAGGATCGAGAGCTCCAGATGGTGATGGTAGGATAGGGGTGGTGACAGACAA
 GCTTTTAATAAAACATTAGGTGGTCAGTAAAGGCTCTGCCCTCAAGAGGGGATACAAATCGCT
 TCTTAAAGGTCCTCACTCTCAATGCTCCACTTTTGGGATTTCAGTTTCAACATGAGTTTT
 GGGGGGTCACTTTGAATCAAGACATGGTGCTCCTACCATCAGCTCTAAGTTTACAGCTTT
 40 ACACCTCCGCAATAACAAGAAAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGA
 GATCTTTCCTAGTTACTTCAGCMAAGTCCCCAGGTTAGTCTGATTGGGCTTGGTTGAG
 CGAGGTGCCATTTCTGATCTGACCACTGTGGCCCGG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 209>:

45 GNMCJ24F gnm_209

CGGCTTCTCTTCTTACTATTTCAAGATGGCTGCCCAATTATGTGCAGAGGAAGAGAAG

TTCTTTCTCTTACTCTGACAGTTGAATAAAAAATCCAAAGCCTGGCTCTCTTTGGTCCA
 TCCTGGAATCAGTCATTATGGCTGGGGAATGGAGTATGCTAATTGACTTAAGGGGAATCA
 GGCCCCAGCACTGGAGTGAAGGTGGGGCTAATGCCACCTAATCCACTGGAGAGTACCAAA
 AGTGTGCTTCCCCAAAGGAAATTCACAATACTGTGGGAAAGGATGAATTGATGCTGAGTC
 5 ACTATGAATGACAAATGCAAAAGATAAACATACCAGGCCCACTCCTTGCAGGAAGCAAA
 AGATCCTAGAGGGAGAGGCTGACATGGAACAGGATGTCTGACCAATAAAACTTCTTCCAA
 TGAGGATTCACAGACATAGTCATACCTTCCAGGTTAAGTAAGGCTCAATTCAGGCAGCT
 GTCTGTCTCAGCTCCTCATGCACATCCGTCGCTTCTGTCTACCCAGCATTGTCTCTCCC
 TTATTCAGTTCTCATTGCTGTGTAAACAAATGACAGAAGTGCACTAATTAAGGCAACACA
 10 AATGTATTATCTCACAGCTCTATAGGTCAAAATCCAAGCACGGCTCAACCGGATTCTCTG
 CTCAGGGTCTCATGGGGCTGAAAATCAGGTGTACAGCTGGAGCTGTAGTCTTATCTAAAGC
 TCAGGGGCTTCTTCCAGGATGATTGGGTGTTTTCAGA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 210>:

15 **gum_210**

ACTACAGGCATGCACTACCATGCCAGCTAATTCTTTAGTTCTGTAGAAATGGGTTCT
 TGCTATGTTCCCAAGGCTGATCTCAAACCTCTGGCCTCAAGCAATCCTCCCATTCTGGCC
 TCCAAAGTGTCTAGGAATACAGGCATGGGCCACCATCCTCGCCACACAAATGGTTTATA
 20 ATTTAGTTATAGTAGTCTGTACCCTCTAGGATGACATAGTTAAACAATAATATATAGTT
 TCAAAATAGCTAGAGGAAGATACTGACACAGAAGAAATGAGAAATGTTTGAGATGGTAGA
 CATGCTAATTACCTGACTGATCACCATACATTATACACATCAAAACATCTTTATGTACCC
 CCAATAATATGTACAATATTATATGTCAATTTTTTTTTTTTTTTTGAGATGGAGTCTC
 ACTCTGTCAACCCAGGCTGGAGTGTAGTGGCGCAATCTCGGCTCACTGCAACCTCCGCTC
 25 CCAGGTGCAAGCGATTCTCTGCTCAGCCTCCTGAGTAGCTGGGATTAACAGGCATCGCG
 CACCACACCCAGCTAATTTTTGTATTTTGTAGAGATGGGGTTTCGCCATGTTGTGTGAG
 GCTGTCTGGAACCTCTGACCTCTGGTGATCAGGCCACTTCAGCCTCCCAAGTGTCTGGG
 GATGCCCGGC

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 211>:

30 **gum_211**

ATACCTCTCCAACCCCATGTCTACTGTATATCCTCTTCGTGCAATTTACTGAAGAAC
 TGCAAAATTATGCTCCTAATATCAAAGCCTTTGCACTGTCAATTTCTTTCTTCTGGAAAC
 35 TTCTTTCTCCAGATAITCCCGTGGTTCATTCCTTCACTtCctgaGGTCTCTGCTTAAAT
 GTCACTCTCTCAGGTCTCCCTGACCAAACTGTCTATAATAGTACCTGCTCCTTTCTTGG
 CTCCTTTTTCTCACTCCTGTGTATTTTCTCCATGGCACTCATCACTCCCTGACATAATA
 TAGTTATTGTGATTATCTATTTTCTGCTGGTTCATTCCAACACACCAGCAGGGAGTTAGT
 TTTGTAACCTGCTGATTCTCAGAGCATAGAATAATGCCTGGCTCACAGCACTACTCAAC
 40 AAATAATTGAAGAATGAAAGCATGAAATAATTACACAACACATAAATATGTATTATAGCTG
 TGCTTGGTGCTATAAAGAGAGAATATTGGCCTTTCTTCTGGCTAATTGCTTTGGCCTGG
 TCAGAGAATTCAAGGAAGGCTTCATTGAAGACTTGAATTTACAATGAATTGATCTTAGC
 CGGGCAAGAGGAGGGGGAAGAACTCTCTGGGCCAGGAACAGCCTGTGAGAGGGTCTTA
 ATCTGGGGAGGATAGCACCTTGGAGGACAGACAGATGGCCGGGCAGGAACCTTGGGA
 45 ATGAGGGGCAAGAGAGGGGTGATACAGCCACTGAAAAGCTTTGGGCTTTATCTTGAGG
 GTAATTGGGAGAGCGGAGGGGTGACATGAGTTTATTGAGATGGTGTTTTTCAAAACAGCA
 TCTGTGTTGAAAACAGCAATCTGGTTCTTTGCTTATTAATAAACTTGATACAGAGCTGA
 CTTGTGTGAGCCCTGTTGAAG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 212>:

gnm₂₁₂

CTAAATAAAGCCTGTTTTATAATAAAGTGTGAATATCTCACATAATTCATTGAACATT
 GTACTGAAGGGGCAAACAGAAATGGTTGTATGGGTACTTGAAGTACAGTTTCTACTGAAT
 GCACATTGTTTTGCACCAATGTAAAGCTGAAAAATTTAGATTTAACCAATGTAAAGTTG
 5 GAGACCCTCTGTGTTTTGTTCTCCTCTTAAGCATACAAAAGTGTAGCCAAAGAGTGTTC
 AAAGCTGGATTACATAATGAATTATTATTATTTTTTTTGGAGATGAAGTCTCGCTTTGTT
 GCCCAGGCTGGAATACAGTGGCGTGAGCTCGCTGACTGCAACCTCGCTCTCCTGGGTTT
 AAGCGATTCTCCTGCCTCAGCCTCCGAGTAGCTGGGATTACAGGCATGCCTGGAATTAC
 AGGCACACGTCACCAACCCAGCTAATTTTTGTATTTCTAGTAGAGACAGGGTTTCGTCA
 10 TGTGGTCAAGCTGGTCTCAAACCTCCTGACCTCAAATGATCTACCCGCTTGGCCTCCCA
 AAGTCTCGGGTTTACAGGTGTGAGCCACTGCACCTGGCTGAAAATCCAGATTTTGTCCA
 AGATTGCAATATAATTTGCCTGGGACAAGTCAATGAGTGAGGAGAGATAAGTCAATGGAC
 TGAAGAAGGGTAAACTCAGCTTTGCATAAACAGATAACAGAGGGGATTTGGTGGATGGG
 GAGCAGTGAGTGAATGGGCAAGATAGGACAAAACCAAGCCCACTTAAAGACAAATAATA
 15 TTCAAAGGACAAAGTTGAGAAATAGAG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 213>:

gnm₂₁₃

TAATGTTTTCTCTTTCAAAGATGAATATTTCTGTAACTATAGAAAGATAAGAA
 20 AGATAAGAACCTTCAGGGCTCTTTGAAGACMAAATGTATTTCTGAATTGGGCATTCAAT
 GACTGAGCGGATAAATCTCTAAATCTGGGTTTTATGATTTTAGGTTTGTGTTTAAATGG
 ATTTCTTTGCTTAAACTTCAGGTGCATGCATGATAATTTGAAGAGCAGAGAGATGGACA
 AATGTGATTTGATTATAAGTCTTTCAAAGGCATTTGAAAATGTATTTCAAGTTTAGTT
 25 AAGCTTATTTTTCACTCTTAAAGTGAAGCAGGAGTGATGTTTTCCTCCCTCCACACC
 TCGAAAGATGGAATGGTTTTTCACTTATAAATTTTCCATCTCAGAAAAGGAGGAGCAGA
 GGTTTTCCAGAAGGGTTAAGAATAAAGGTGGGGAAGGACAGCCCTTGTTACCATAGAGC
 AGGAATCCATACGGAAGAGTGGCTGGTTAGATTGCTGGCTGAGAGTGATTATTTA
 30 TCCAACCTCTTGATCAGTGTGTGAGAATTAGTAAGATAATGGATTTAAGGGCTTAGA
 GTGTCGAATCAATGTTAGCTACTGTTGTTATTTCTCAGTACTACCTGTAGGCTGTGATGG
 ATATTTGGAGACATTTGTACCAAGGGTTATGGGGCAATAAGTGCCTGGTTCCCATTTGGC
 CCAGTGAACTTTTCAGGACTTAGGATGAGGAAGGCGGAAAAAGCCCTG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 214>:

GNMCJ29F gnm₂₁₄

CCGGCGCGATCACAGCTCGTTGCAGCCTCGGGCTCCTACAGCTTATGCAATCCTCTCACC
 35 TCAGCCTCCCAACCCACACCACCAAGCCAGCTAATTTTTTGTATTTTGGTAAATACG
 AGGCTCAGCTTTGTTGCCAGACTGGTCTTGAACCCCGGCCCAAGTGATCCTCCACCT
 TGGCCTCCCAAGTGTCTCCCACTCTACCTCCCATCTTTCCCTTAAAAAAGTCTG
 AGTCTGGGTGAGTGGCTCACACCTGTAATGCCAGAGCTTTGGGAGGCTGAGGCGAGAGG
 40 ATACCTTGAAGCCAGGAGTTTGAAGCAGCCAGGCAACACAGCAGACTCCGTCCTAC
 AAATAACACTTTTAAAAAATACCCAGGATACCCAAAGGACTATAAATCATGCTGTTTT
 AAAGACACATGCACACATATGTTATTTCGCGCATTTATCACAATAGCAAGACTTGAAC
 CAACCCAAATGTCCAACATGATGACTGGATTAAAGAAATGTGGACATATATGCCATG
 45 GAATCATGTGCAGCCATAAAAAATGATGAGTTTACATCTCTTTGTAGGACATGGATGAAA
 TTGGAATCATCATTTCTCAGTAACTATCGAAGAACAAAAACCAACACTGCATATTC
 TCACATATAGGTGGGAATTGAACATGAGAACATGGAACACAGGAAGGGGACATCACA
 CTCCTGGGGCTGTTGT

-668-

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 215>:

gnm_215

```

5  GTACCCCTCTTTAAATCTTCAAATATCTAATCAGGGGTTCAAATTTCTCAATTGTCTC
   ACAATTTTGGGTTTTTTTGAGACAGGATCTTGTTCTGTCACCTCAGGCTGGAGTCTGCTG
   GCATGATCATAGCTCACTGCAGCCTTGAATTCGGAGCTCAAGAGATCCTCCCATCTCA
   GCCTCCTGAGTGGCTAGGACTACAGGTGTGCATCACCACGCCAGGCTAAATTTTAAATGT
   TTTTATAGAGATGGAGTCATGCTGTGTTGCCAGGCTGCTCAAACCTCTGGCCCTCAAA
10  CAATCCTCGGCCCTTGGCCTCCAAAACACTGGGATTAGGTGTGAGCCACTGTGCCGTGGCC
   TAATTTTTTATTTATTTATGGTATTTTGTGTTGTTTGTCTTGTCTTTCTTTTTTTT
   TTTTTTTTTTGGAGACAGAGTTTCACTCTTGTCTCCAGGTTGGAGTGCAATGGGATGAT
   CTCGGGGGACTGCAACCTCTGCCTCCCGGGTTCAAGAGATTCTCCTGCCTCAGCCTCCCG
   AGTAGCTGGGATTATTAGCATGCGCCACCATGCCAGCTAAGTTTTTGATCTTWTAGTAG
15  AGATGGGTTTTACCATTGTTGGCAGGCTGGTCTCAAACCTCCTGACCTCAAGTGATCTGC
   CCGCCTCGGCCTCCAAAGTGCTGGGATTACAGGTGTGAGCCACCGTGCCACAGACATGAC
   GTGTTTGAATCAGGATCAAATAAAGTCTAGATTCTACAAGTGATCAATCTTTGTTTTT
   GAGTTAATAGGGTCTCTTCTCTCTCTCTCTGTAATATATTGGCTAAAGAGACTAGGTTG
   TTTGTTTTGGGGAGTTTCCACAGCTTGAATTCTCTGGCTGCACCTAGTCT

```

20 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 216>:

gnm_216

```

   CCAGTCTGGAGTGAATGGCGTGATCTCGGCCCACTAAAAACCCACCTCCTGAATCTAA
   GCAATTCCTCTGTCTCAGCCTCCTGAGTAGCTGGGACTACAGGCTCACACCACCATGGCC
   GGCTAAATTTTGTATTTTAGTAGGGACGAGGTTTTGCCATATTGGTCAGGCTGGTCTCA
25  AAGTCCTGGCCTCCGGTGATCCACAGCCTCAGCCTCCCAAAATGCTGGGATTAGAGGCA
   TGAGTCACCATGCCAGCCTAAACTTGGCAAGATAATAATCACCTTTTTAAGTGTCTGT
   GGGCACTGTCTGGTTGTTTTCTTTAGGTTACCATGCCAGCAATGATTCCTTTTGAGTT
   TCTGACAGAAGATAGTGGTTTTTCATCCAAATAAGTCAACTACTTACCCCATCCCTAAGC
   CACTTGTATGGAAGAAAGAGGAGAGAAGCCAGTACTGTGACTGCGTAAGCGTCCCCCA
30  GCATCAACCCGGCTATGAGATGTTGGCAGCTGAGACCCGGGAAGTCTCAAGGGCACCAAG
   CCCCATCTGTCTGCACCTCACTCACCTTCTCAGTACTCGCATGGGCACTGTCACTGACTT
   TACATGCTGCTGCAGCTCCTTGGTGAGCTGGCCCTGGTCATGGGACAGGAATGTGGGGT
   CAGGACAAATAGAGAGCTTCACCATTTGCAGAAATGAGCACAGGGGCTCATGATGAGTGCCA
   ACCATTATAGATAATTTAAAAAAAAGTGTTGAATGAGTGGAAAAACAAAGTGATGTTTG
35  AGCTCATAGTGGTCAAGGGCTTCAGAAAAGGACAGACCCAAAGTTCAAATCCTGTACTTT
   GAA'TTCTACTTTCATGCCATGCAAAAT'ACTTTTACCCCTTTTAACTCAGTTTTCTCTGT
   TGTGAAACAGGAACAATAGTTTTCATTCGTTCATTCTCTCAAGATTTACAGAGATC
   ATACCTATAAACAATCCAAGTCATTTAAATGTATCATTTCTGTCTAATAATAGTGGGA
   TCCATTTCCTACTATTATTGGATATACAGTTCTGTGGCTGAAACCTACAAAAACAATAAG
40  TTAAGTCTAAPAAGCATTAGTGATTCTCATTTTTATATTACTAATTATAACCCATTATTA
   ATACACAAGGCCTTGTCCGGCGAGGTGCTCAATAAACACTTGTCSAATCAATGCATGT
   GGGCTCCGGAGGCCACTGTTTAGATTCTATTCTGCCCTCCACCATTATCAGCTGTGTGA
   TCTGGTAAAGATAATCACCTCTTATGTCTGCATTCCTCTCCATAAATATATATAA
   TGAGAACTCTTAGCTCATTCCGTTGTGGTGAGGGGTGAATGATTGGCACACAGGAGGG
45  CTTGTTAAACATTAGCTGTGATGATCTCCTTCCAAATCTTCATTTTCAGAGCCACAGATG
   AGGCCATAGTGCACACAGGTGACCTTAGAGTGAAGTACACATGATCGCCAGCTATGCTC
   TATCTCCACCATAGGTCCAAGACTGGGTAGTCTGGCCTGGAGGTTTCTGCTGCATCTGCT
   CTTCTCAGTGTTCACCTAAGGACTTTTGATTTTCTCTCGCATCCCAACAGATGGGGT
   TCAGGCTGCCGGACACAGCTGGGTGATGCCAGGGCAGTGGTCACTGTGCCAGCCCGGTG
50  AGGTAGCTGGAGGATCATTGTTCTCTCTCTCTCGGCTCTGGGCAGATGCCAGGGCTGGG

```

GTGACCCATGCCCTCAAGTTTCTTGCTTTGGTGGGCCACATTTTCCCTTGGCAAAGAGGG
 TAAAGGTCACAGGATGCCGGAGAGCTGTGACTTCTGTGCCCTGGGCCCAACATATGAA
 GACCTGACACACTATGCTAAAGTCCACGCTGGGTGCTCCCCAGAGCTTCTTGCTCTAC
 5 GCGCTTCTGCTGAGGGAGGAATGAATACTATGTCTCCACAGAGCTTTGGGAGCTTGTAGCA
 AGCAGCCTCCCCAGCGCAAAATCTCTTGGAACCTCTAATGTGTCTGAAAGG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 217>:

GNMCJ31F *gnm_217*

CCACAAATATAACTTTAGCAATATTTAGCATAACTATCAAAATACAAATCATATTAAA
 10 TTTGTATAAATGATGCAATTTTCGGAACACGCATATCAACAACATACCCATAAATATAA
 CTGAGATGAGATCTAATGTCACTTACCTTGACAGTGCCCTCCCATGCAGTATCGCCACAT
 TTGCAATGCCTGCCATTTAATCTACCAAAATAATCGAATCACTTAATACCTCTACAAG
 ATGAGAGATACATTTCTTAGACTCCCCAAGGGATGCAGCTGAAAAAATCCCAAAGTTAG
 15 TTTTAAGCCAAAAGACTTGATTAGGATTTTGACACTGGAGAAACCCATCAAGAGATGTC
 AAGTTTGAACACATTGATCAAAACAGAAATCACAGGTCACATTAAAGAGATTAATTT
 AACCAGAGACTTCCAAAGCAATACAGAAACTTACATGGATATAAAACCCCTAACCCCTTT
 AAAGGTCAGATTGCTAAGTGATCAAAAGGGGTACTTGAATTGAATCGACACAGGAAGAG
 TGTGTACAGGGTTATGAGTGTAGGCAGGTGGTTACTTTGGTCATATCTCCATTGGCCACC
 20 TGATTACACATGAGAATGGCATCTTTACTACCAGAAAGCCAGTATTATAGGAGGTGTAG
 GAGCA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 218>:

GNMCJ32R *gnm_218*

GTACATTATGTCTCTTAAACAAATGACTCCCTGTCTACTAGGCATTGTTCTAGAGTG
 25 CTCATTGGGGGTGGTTTGAAGACAGTGCATGCTGTAGCTGCAGTACTTTATTGCTGG
 TGCTTCTAGCCCATCCTGGTTTATTCTGGGATGCCTGGTGTCAGAACCTGGCAGGTGC
 ACATGTGAATAGGAGACACAGGGAGTTCTCACTGGTCAGCAGCTTCTTAAAGCACAGGA
 AGTAAACCTCCAGCCCTGCCACCAATGTCCTTGCCCTCTCATCTGCCTCATGGGTGTAGA
 30 GAATCATCTGGAGTGTGAGAGTGGGGCTCTGGAATTACCTTGACACTGGTTCAAATCCAG
 GCATCGCCACTTAGCAATGGTCTAGTCTAGGTAACACATAGCCTGTTAAGCCCTCAT
 TCCCATCTGTAAAATGGGATTGTGGAATGCCTTCTGATAGGGCTCACAGTGTGGG
 CACAGCTCAGTGTGCATCAGTGTACGATCATTCTCTTTCAGGCTCTGTCTCGTG
 ATGAGCTTCTGTAAAGACCCACAGAGGCTGAGGAGCTTTGAGGTAGGAAAGTGA
 35 CTCGGCTGGGTGCTGAACAGGCCCTTCAGAGCCTTCTGCCAGAGCAGCTACTTTTCCA
 GGTGGGAGAGTTAGGCAGTCATCTGTAGC

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 219>:

GNMCJ32F *gnm_219*

CCGGGCAACTCTTCTGCTCGAATCATGTAGGTCTTCCCTCAAAGCAGGTCTAGCTTCCATC
 40 CATTTGCTCAGTTATTGGCTTGCCCACTGGGCAGGTCTTTAATAATAGTTCAAGTGGTTT
 GTACCAGCAACTGATTAGAAATGCAAAAGTATTAGGCTCACCCTTACCTACTATATGT
 AAAACTCTGGAGTGGGGCCCCCAATTGTGTTTTACAGCCTTCCACAAATGCTGATG
 CAAGCTCAACTTTGAGAATCACTAACAGAAATTAACAGTCCAAGGGAATGAGAGAGCTTCA
 TTAAGAACTTGCATATCTGTAAATGATCTTGAAGATTATACACCAAGCACTGTATGCT
 45 TCCGTGTTTTCTGGGAGATAATTACTCTTTTGAAATCTTCAATCTGGTCTGAACACA
 AGGCCAGAGTTGAGAAGTGCTTTTAAATATCATTACAGAGTCTGTAAGCCAGCGGTT

-670-

CACACCAAAAGTTCAAATGCTGTAAGGCGCTGTGTTTACTAGCTTAGACACTGAAAAATCA
 GTCACTGGCTGGGTGAAGTGGCTCATGCGTGTCACTCCAGCACTTTGAGAGGCTGAGGCA
 GGAGATCACTTGAGCCCAAGAAATTGAGACCAGCTGGGCAACATATCAAGACCCCTTAC
 TCTGCAAAAAATAAATAAATTAGCCAGGCATGGTGGTGTGCGCTTTAGTTCAGCTACT
 C

5

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 220>:

gnm_220

CCTGACCCCATCAGCAGAGCCTAGGTCACAAGCCTCTAAATCCAAGGCCATCACCTGT
 10 TTCCCTGTGTGATTGGAATGGGGTCAAGCTCCCATTTCTCCTTGAAGAAGTGAAGCCT
 ACTTTGAATATCTCATCAGGAAGGCATTTATTGCTGATGGCTGGAAATATGGCATCAAA
 TCCTTGTCAAGCATCCGAGCTCTGCGTTAGTTAATCCAGCTGGGGAGAAAAAGGAATCA
 CGGGGGTTTAGTTCAAGCCATCAGAACTCCGCTTGTTTATTAAATGGTGCTGCATATGT
 TCAGATCTGAGTGTCTAGGCAGGCATCAATCTTTACAAAAGGCCCTGGAAATCACAATG
 15 GGGAAATCAAGTTCTTATCACTCAGAAAAAAGAAATGTGGGTACATTAGCCCTGATT
 GGCTCTCTACAGTGAACGCATGCCAGAAAGGAATCTCAATTTACACACTTTCAAATTTT
 GTATAAACCCTACTTAGGGGCCAATTAATCACAATCTAAACTAGCGGTTTCCAAACTTT
 AGGTACACAAAGAAATCCAAAAGAGCTTGTTTTAAAGCAGATTGTCAGACCCACCCCTC
 TGCACCTTCAAATCATGAAATGTAGGTTCTACTTAACGCCACTGATGTTTGTGCACAT
 20 GGCCAAAGGATAATGTTTTATTTGTGTCCCACTTTAAGTTTGGAAAGAGAGAGAAAGG
 TATGCTCAGGGTGAGTCTTACCTGCAATGGTCCCAAGCTCCTGCAAGACAGAACTGGTCC
 ACTCAGTGGGATCCCCAAACCAACTCTCAGCTTCTCTTAACTCGGCTAAGCATGTG
 TGCTGCAGAGCAGGGTCCCAATTTCTGGCCACTACCAOCCCTGGTAGTGGTTAAAGAGGGAG
 GGATATAATATGAGCTTGGACTCTTCAGCCAAAACCAACACACACACACACACACAC
 25 ACACATACACACACACACTGCACAGTAGGCTCAGCAGGGACAGCAGATCCAGCTTATCCC
 ATTAGCCCATGGGATTTAGCCAGAAAGGTGCCAAGTGTGAGGAGGTGGAAATATCTGG
 ATGGATGGATGGATAGATGGATGGATGGATGGATGGATGGATGGATGAATTAACCCATT
 GCCATTTTGACATTCATATTTTAGTTACCTGAATTCGAGATCTTTATAAGTGGGATTT
 CAGTGATGTTTATAGCACACAGGGTTGCACCAAGTCTCAACCAATGAAAGCTCTCTCAGT
 30 CCTGGATCTGTATCTGAAATCATCCAGGTACCCCTGCAAAATGGATTAGCCATAAAAA
 TAGTAAGAAATAAAGATAAACCATCCAGGGATGATCCAGGGTCCCCA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 221>:

gnm_221

CCGGAATCTGTCCTTATCATGTGTTTTGAACCTTTGCTTTTCTTGTTGGGCTTCATTGA
 35 GAGACAGGCTCTATGCGTCATGTGGTAGGTTCCAGCAGATCCTGTGTATATCCTTCTA
 AGTTCAAGTCCAGAGTAAGAAAGCTCTTCCCTAATGCTCCACTCAAAGTTCTGGTTGA
 CTCTGGTTAAATCACATGTCCCAATCCAGAACAGTGAAGTGCAGCTAGGCTAAGGTATGAA
 TTGAAATTCATCACTCTCGAACTTTGGTGCAGTTAGCTTTGACTGAACCATGTAAGGAC
 40 GAATACAGAGAGAGGTGGTTCTCCAGAGGAAGTTATGAATGATGAATAGCCACTGTGCTAG
 AATTATGGAGACTTATGTCTAGCCGCTTAAATCAAGGCTTAGTTTAAATAGTTTAAAC
 ACCAAAGCATTTTGTGTGCTACTCTTGGAAATGAAGAGTAACCAATTGGAATTTGAAGGGG
 GAACATATTTCTGTAGGACACAGAGGAAGAAAAATCATTAAGGGGTAAACATATTTCT
 GTAGGACCATAGAGGAAGAAAAATCATCTGCGTGAACCTCATGAAGAAGTGACATT
 45 TGAGTTGAACCAAGAAAAAAGAAATGCTGCACCTTGGAGAGTCGAAAGGGCATT
 TCAGATGAAGGAGCTGGTTTGAACAAAGGCAAGAGACAGGAAATATAAGGTTTGTGTT
 GAGGTTGTGGAAGAGCTGGGTGCGGTGGCTCATGCGCTATAATCCAGCACTTTGGGAGGC
 CGAGGTGGGTGGATCACTTGAGGTGAGGAGTTGATACCGCTGGGCAACATGGTGAAC
 50 CCCGTCTCTACAAAAAATACAAAAGCCAGATGTGGTGTATGTGCACCTGTAATTCAGCT
 ACTTGGTGGCTAAAGCAGGAAATGCTTGAACCTGGGAGGTGGAGGTTGCAGCGAGC

TGTGCCACTGCACTCCAGCCTGGGTGACAGAGCAAGACTCCGCTCCAAAAACGAAAA
 AAAAAAAGGGAGGAAGAAACGTTGTGGAAAAAGATGCTGGAAAAGTTTGGATCCTGA
 TGCAGAAAGAAAGTTGTATGTCCAAACTGTCTGAGGGTCAATAAGAGTGACTGAAGGAATAA
 GCAGCAGACACACAGGACACAAGTGCCTTTAATATTGGTG

5

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 222>:

GNMCJ35R gnm_222

CGAAGCCGATATATGCCACCATATAAGCGAAAAAGAGTCCGGGATTTTTTGCTCGCCAGA
 CATACACCGGTTCCGGGCATTTTAACCGGTTTATCAATCGCGCCTCGCGGCCACCTTTC
 10 CATGCTTCGCGGAAACAAATATCGGGATAAGGAAAAAACGGCAACGACAAAAAATCGC
 TGTACATCCATAACTACTTTCCCTGTGTTCTTTTGTAAATCAAGTAAGTGTTCGGGTGTGA
 CGGCGGGATACCCCTCGCATCTTCCGGTACCTGGTGCAATAGCCGAATAGGACCACGCG
 GCCCTAAAAAAGCGGTTACGTTTAAAAATATAAAGGTGAGCCAGCGCACCGAAACGGG
 15 CGGCAAAATTCAGAAATACGTACTGACGACATATCTTTCGGTGACGGTGACGGCATAACACT
 GAGCGCTGAATCCCCATATGACAGCGCAATAAATAATGCTCGCTCAGAGTGGAAACGTTGGG
 TGAATAAATGAATCATTAGTATCGAAAACTTTGCGGTGTACGACGATGGAATCCAGCGT
 ACAGAAAGCCTGCGTAAATCGAAGCAATATCTGATGGGTGACACACGACGAGCATTAATC
 TTTGCGCATGGTCATCGGCTCATTAATACTTTGCAATGCGTTATCGCCGCTCAGTAATAG
 ATAATTTACCTTACCCTGTTATAGGCATTAATCGCTCCTTGAATGC

20

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 223>:

GNMCJ35F gnm_223

CCGATGTATGTTTCACGCGTTGCATAATTAATGAGATTAGATCACATATAAAGCCACAA
 CGGGTTTCGTAAACTGTTATCCATTACATGATTATGAGGCAACGCCATGCATCCAGCTTT
 25 TCAACCGCTTTTGGCCCACTTGGCGATTAATTCGAATCTGCACTGGAACCTATTCTGGC
 AGACAAGTACTTCCCGCTTTGTTGACCGGGAGCAAGTCTCATCGCTGAAGAGCGCAAC
 GGGGCTGGACGAAGACGCGCTGGCAATTCGCACTACTTCGCTGGCGGCGGCTGTGCGCG
 TAGCCCATTTGCGAATTTAATGTTGGCGCAATTCGCGCGTGTGAGCGGAACCTGGTAT
 TTCGCTGCCAATATGGAATTTATTGSGTGCACAATGCAGCAACCCGTTTATCGCCGAACAA
 30 AGCGCGATCAGCCACGCGCTGTTGAGTGGTGAAAAAGCGCTTGCAGCCATCACCGTTAAC
 TACACGCGCTTGGGTCACTGCGGCTCAGTTTATGAATGAACGAGCGGTCTGGATCTG
 CGTATTATCATCTGCCGGGCGCGAGACACGCGCTGCGTGACTATCTGCCAGATGCGTTTGG
 GCCGAAGATCTGAGATTAACACGCTGCTGATGGACGAACAGGATCAGCGTATCGCGCT
 35 GACGGGTGATGCGCTTCTCAGGCAGCGATTGCGCGGCAACCGTTCGCACATGCCTTA
 CAGTAAGTCGCCAAGCG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 224>:

GNMCJ38R gnm_224

CTGATAAAGACATAGCTGAGCCTGAGGAAGAAAAAGAGATGTTTTGTTTGTGTTTGA
 40 GATGGTGTCGCTCTGTTGCCACAGGCTGGAGTGCAGTGGTGCGATCTCGGCTCACTGCA
 ACCTCCACCTCCCGGGTTCAAGCAGTTTCTCTGCTCAGCCCTCCTGATTAGCTGGGATTA
 CAGGCAGCTGCCACCATGCCCCGGCTAATTAATAATTTATAGTAGAGATGGGTTTAC
 TGTGTTAGCCAGGATGGTCTCAATCTCCTGACCTCATGATCCATCCACCTCGGCCCTCCA
 AAGTGCTGGGATTACAGCGGTGAGCCACTGCACCTGCCAAAAAGAGGTTTAATTGAC
 45 TTACAGTTCACATGGCTGGGAGCCCTCAGAAATCATGGCGGGAGGTGAAGGCACTTCT
 TACATGTTGGCGGCAAGAGAAAAAGGAGAGATGTAAAGTGGAACCCCTGATAAAACC

ATCAGATCTCGTGAGACTTATTCACATCATCATGAGAACAGTATGGGGGAACCTACCCCTAT
GATTCAAATATCTCCACCAGTCCCCCCCCAACACATGTGGGACTTACAGGAGTACA
ATTCAAGATGAGATTGGGGCCAGGCGTGGTGGCTCATGCCTGTAATCCAGCACTTTTG
GAAGCTGAGGCCGGT

5

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 225>:

gnm_225

AAAAAATTAGCCAGGCGTGGTGGCAGGTGCCTGTAATCCAGCTACTTGGGAGGTTGAGG
CAGGAGAATCACTTGAACCCAGGAGGCAGAGGTTGCAGTGAGCTGAGATCATGCCACTAC
10 ACTCCAGCCTGGGTGACAGAGTGAGACTCCATCTCAAAAAACAACAAACAAACAAAC
AAAAAATTCAACTGGGAGGTACAAATCAATAGGTTTGTGACAGGGCTTTGGAATCCAC
ATATTATAAAAACTCTTCAAGTGATCCAAATGTGAGCCAGAACTAGTGACCAACAATAAT
TCACATCCCATGGAGCTCCACATGGGCACCTCCTGTGAGTGCAAGCACCTTCGGGTCTCT
GGACACACTGAACCTCAACCATGAACAGAAATACGGACTAATGTACAGCTGGTATTGTCAT
15 TAATTATGCCAATCATGSAAAAAACAGACACAGCTTCTCACCAAAGGTTGAACCTCCA
ACTTCTCCTAAATAGCGCTGTTCTAAAGCTAGGCACGCCCATGTGGGCAGACTGAATCA
ACCTTCTTTCCCATGACCAACACTCTCCTGACCTTAGGAAGCCACAAATCGTTGCAGA
GAAGGAAAAAGCCTTCTATATTCTTTCCCCACAAAAAAGAGAAAGAGAGAGAA
AGTCAAAGCCTAAAGTTTAAAAATCTAGATTAATAAGTTGGTTTGGGCTAGTTACAACT
20 TCAACCTTGGAAAGATAAAGGAAATCTGTTAATTACCCCATATGAGATTTTAATAGA
GAAAGGCTTAAGGGAAGACCACCACTTAGTGACCAAGGCAGGATGACATTTTCAGAGCA
CCTAGCTGGGCTGGCAGGCACCAATCTGTTTCTCTCAAGTGTACTGAGAAGGGAACGT
GGGCGAGGCACAGTTGTTACACCTGTAATCCCAACGCTTTGCGGGGACAGGAGCGGGCA
GATCACTTGCGGTCAGGAGTTTCAACAACAGTCTGGCCAACTGGTGAACCCCGCCTCTT
25 CTAAAAACACAAAAATTAGCCAGGCATGGTAATCTGTGGTCCCAGCTACTCGTAAGAAGT
AATGCTATAAAGTGTACAAGTGGTAAAAATGACAGAAATTAACAGTTATGCTTTTCATT
GCCACGCCCTCAGACAGCATCTGGCTTACAAAAACAACTGAAAGTTACAAACA
AAGTGAACATATACTTCAACAAACCAATTCAAAGCCTTGGAAATAGACCAATTTATGCT
AAGTGCTAAATGACATGGCAGCAAAATTAATCATATAAGGAATCGTTTCAAGTTTGCTAA
30 ACTATTTTAATCTTTCAATCTAAGGCTTAAACAAAGATGAGCAGCACTAGCTGTTTCCA
CCCTTTGATTATGATAAATCTCATCTCCACTTTCATTAAATAACTGCTAACCAATTTAAA
CAATCCTTCCGTGGAATCTGTCCACCAACAGTTTGATTGCTGTTTCTTCAGCATCTTC
AATATCTGCCGGGATGC

35 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 226>:

GNMCJ39R gnm_226

GGGCTTGGCTGATCCATGGAGATATCTGCAGCTTGCAGCAGCTGAAGTCTTTATTTGGC
TTTATCTCCGTTGTGGCCTCTGATGAGCCAGACTACAGAGATGCTGATGAATCTGGGAG
GCAATGSGTGGAGGCTGTAGTTTCCACGGAGAACTTGGCCCTGGGGAATTCCTTCCAGCT
40 TCTGAGTCCCTGTGGCACATCTCCATGTGTGGCGGAACTAGGTGATTGCTCCTAGATT
TGCTTAGTTCCTTTATTAGAATTATAAGCTTTTGGCCATGTGACTTTGTAGTACATCTCA
ATAGGTAGACTCTAATTCCTTGCCTTCTAACTTTGGGCTTTGGTCAATTGGAATGTGAGC
AGACACATTTTCCCCAGCAGAAGTTTAAATGTGCTGCATGATTTGACTTGACCTCTTG
GCAATTGCGTCTCATGTGAAGGACATGTGGAGCAGACCTGAACTCAACCCAAACCTTGG
45 AGCCAAAGCTGAGCTCAGCAGAACTAGCTGAGCGCAGCCAAAGCCAAACCAAGTGAATCA
CAGCCAACTCTGGAGACTCAGAAGCAAGAAAACAAATATATGTGATAGGGATCTATTGGGAG
TTGAGAGCAATTTCTCTTTTAAAGTAATTGTGATCTTTTGTAGATGGAGTCTCACTTTG
TCACCCAGGCTGGAGTGCA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 227>:

GNMCJ40R gnm_227

CAATAACTTTTTTTGTATAGCCATTTCATTGTCTAGATCAATGACAGAACAACATATTTTC
 5 TTTTTCCTCAAAGCCCAGTGATCATTAAAGAGCGATGTAGATGTTTCAGATTCTG
 ATGATGAAGATGATAGTAAGTATAAAAAGGTTTAAAGCCTGGGCACAGTAGCTTACACCC
 ATATCCAGCATTTTGGGAGGCCAAGATGGGAGGATCACTTGAGGCCAAGAGTTTGAGA
 CCAGCCTGGGCAACATAGTGAGACCTTGTCTCTGCAAAAAACATTTTTTTCAAATATT
 TTTCTAAAAAGGCTTAAAGTAGAACTAGGCAGGAGTGTGTCTTTAGTCACAGCTA
 10 CCTGGGAGGCTTAAGTGGGTGATTGCTTGAGCCAGGAGTTCAAGCTCTGCCTGGTGGC
 AAGACTCTGTCTCTTTAAAAAAGTAAAGCACAGAATACCTGGCATCTATTCTA
 ATAAGTAGACTGCAACAAATGACAACCTTTTGATGTAATCTTTTTGTTATATTTACCATG
 ATATGCAGTCAGTTGTCTGAATGCATTATTTATATAATAGTCCATTTAATTTTCATTG
 ATGCTGGTGGAGAAAAGTCTTGAAT

15

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 228>:

GNMCJ40F gnm_228

CCGGGAGGCCGAGGCAGGCAGATCACAAGTCCAGCGTTCGATAACAGTGTGGCCAATAT
 GGTGAACCTTTGTCTCTACTAAAAATACAAAATTAGCTGGGCATGGTGGTAGGTCCTG
 20 CAGTCCCAGCTAATGGGAGGCTGAGGCAGGAGAAATGCTTGAACCCGAGAGGCAGAGGT
 TGCAGTGAGCCAAAGATGACGCCATTGCACTCCAGCTTGGCGATAGAGTGAGACTCGGT
 TCAAAAAAGAAAAATAAAATAAAGACAGAAAAAGAAAAAGACCTAATATCATCTA
 AAATGAAATCATACAAACAACCTTTCCATGATGTTCTCAATGAAAAGATTCTTACCAGT
 GTTCTCTCTGATTTTCGAACAAATGGAAATTTTCCACCAAGTATTGGCATGAGAACCAC
 25 GGTGCCCTATTTTTAAAAATTAATCAATCCATGTTGACTTTACTTTCTAGAAAAAGGAA
 TAAAAAGGAAAACTACCATTCATAAAGCAAATATCGATAGACATAGGAGGCAACAGGAA
 CCCTTACCTCAAAGAACTGGAACTTTTTTGTGTTTTGAGACGGAGTTTCGCTCTGTG
 CCCAGGCTGAGTGCAGTGTACAATCTCGGCTCACTGTAACCTCTGCCTCCCGGGTTCA
 AGCGATTCTCCTGCTTAGCCCCAACAGCTGGG

30

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 229>:

GNMCJ41R gnm_229

ACCCTGATGATAAAATAACAACAGAATAAAGGTCACTCTGGTTTACCCTAACAAAATC
 AAAAGGAAGCATCAAAGGATCAAGCTGATTTGAAAGTAACCTAAGTGTATGACAGAACA
 35 AAGCCCAATACTCTTCAAAGAAATACAATAAATCAATCAATGTAATAATCCAC
 AATGCTCATCACCCAATCAAPATTGCTAGGCTTGCAACAAAAAAGAAAATATGACTCA
 TAACATAGAGAAAAATCAGTCAACAGAAACAGACTCAAAATGACCATCATGAGGGAATT
 AACAGTAAGGATATGAAGGCAGCTCTTATAAATATGGAATAGTTAAAGACCCAGAAACA
 TCCACCCACCTGTCCCGGGTCCATTCTGTTGCCAGCTTAGGGAAGCCAGAGTGCTAT
 40 GGAGCTGAGTCCAGCTGCTCCAGCTCACTCTCATTAAAGCCAGAGCAATCGCCCCAG
 GGAGACGATATGGTGTCTCTCCAGTAAGATGGCATGTCCCAACCTTTAGGCCAAAAA
 GGAAATAGATTAGACTGAACACTGTGATGGTATTACAATGATTGAATGTTTGTGCCCT
 TCTAAATGCAATGTTAAAACTAATCTCCAATGTGATAGTATTGGAAGTTGGGCCCT
 GGGAGATGATTAGTGCATAAGGGTGGAGCCTCATGAGTGGGTAGTGCTTGTAA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 230>:

GNMCJ41F gnm_230

5 CCTGATCCAAATAACAATATAACAATAAAAAACAATACACATAAAAAACAGTAGCATT
TTGACATAACATTTTGTACATATTTACATAGCACTTATATTGCATCAGGTATTATACTA
ATCTAGAGATGATTTAAAGTATACATGAGGATGTGCATAGATTATATGCAAAATACTACAC
TATTTTATATAAGGGACTTGAATATCCATGGATTTTGGTATCTTTAAGAAGTCTCGGAAC
CAATCCTTGGTGGAGGTATCCACAGGGGCACTTCATTTTATTTATGGTTAGTTCTTTATT
10 TATTTAGCTAAATGTTAGACTTTTCAGGTTGCATTAAAAAATGCTCAATGTATGCTTT
ATACATATACTGTTGGGTACTTGTCTCATTTACTCAGGCTAAATTCACAGAGGTGGAATT
TCTGGGTCAAGAATAATAAATACTTTAAAAGCTTTTGATACAGATAGCCAAATTGCCCTC
TCAAGAGTATGTACCAACTTATATTCTCAACTACAACAATGAGGGGTACCTTACCTTG
TATCTTTCCAGTATCGTAAATGGTGATAAGTCTTTATACTTCTTGACATGTGAAGATCA
ACA

15

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 231>:

GNMCJ42R gnm_231

CGAAACTGTCTAATGCGTAACCGGAAAAGCGGTTCCGCGCnATCCGGCCATTTTCAGT
TTTACTCTTTCTCGGAGTAACATAACCGTAATAGTTATAGCCGTAAGTGAAGCGGTGC
20 TGGCGCGTTTAATCACACCATTGAGGATAGCGCCTTTAATATTGACGCTGCCTGTTCCA
GAGCTGCGATTGACAACTCACCTCTTTGGCGGTGTTCAAGCCAAACGCGCAACAGCA
GGCTGGTGCCCAACAGAAACGCCCCACGACCGCGGCATCACTCACGGCCAGCATCGGGGCG
TATCGACAATCACCAGATCGTAATGGTCTGTCGCCAATCCAGTAATTGACGCATCCGAT
CGCGCATCAGCAGTTTACAGACGGTTAGGTGGCACCTGACCGGAGTAATCATACAAAGC
25 CTCTTTGCCAAAAATGCTGGATCACTTTGTTGAGCTCATCTTTACCTGCCAGATATTCG
ACAAGCCATGTTCTATTACTCACGGTAACACAGGTTATGCGAATAACACGCGCTAAGTCGG
CATCAATAAATAACACTTTTGTATCGGACTGGCGCATACCCTGCCAGAGTTGAAGCTGA
CAACCGTTTACCCTGTCTGGCGTCGCACCGGTGATCAT

30 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 232>:

GNMCJ42F gnm_232

CCGGCAATGGCTGGAAACAGAAAGAGATCCCGGATCCCTATCGTAAAAGTCAGGACGCATT
TGAACATGCTACGGTATGTTGGAGCGGCCAGTCAGGAATGGGCGACGCTCAGCCGGT
AATTTGAGTTTATAAAATACGATGACAACTAAAAATATGAATACGCCACACAGGCAGCAT
35 CAGGAAAATGAGATCGATCTGCTTCGTCGGTCGGCGAGTTATGGGATCACCGTAAGTTT
ATTATCAGCGTGACCGCGTTATTACGCTGATCGCTGTCGCTTACTCGCTGTTAAGCACA
CCAATTTATCAGGCAGATACTCTGGTCCAGGTTGAGCAAAAACAGGGCAACGCCATTCTC
AGCGGCTGAGCGATATGATCCCTAACTCATCGCCGAGTCTGCACCGGAGATCCAATGTT
CTGCAATCGCGCATGATTCTCGGTAACACCATTTGCTGAACCTGAATCTGCGGCATAGTGT
40 GAGCAGAAATATTTCGATGTTGGTTCGCGGCTGGCGAGATTAACCAAGAAACCA
GGTGAGCTGGCGATCAGCTGGATGCATATCCACAACCTGAATGGTCAGGATCAGCAACTG
ACACTCACGCTTGGGGAACCGGCACTATACACTGGAAGGTGAAGAGTTCACCGTCAAT
GGTATGTCGGACAGCGCTCTGAAAAAGATGGCGTTGGCGTGACTATCGC

45 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 233>:

GNMCJ43R gnm_233

ACCCGGCGGAAACACCCGAGCAGCGCTCGGTGCCGAACAGTTTGACCAAGCCCCGAAAA
 CAGGACATACATCAGCCCGCGCAATGAGGCCCCCGCCGCGCTGCCGGGCCATCTCT
 CTTGTATGACCAGCGCCGCTCGGCGAATAAAAGGCGAACGAACTCCCCAGGAAAAATCGGCAC
 5 CTGCCCGCGCGTGACAGGTGAAAAATCAGCGTGGCGACCCCGGCCCGCAACAGCGCCACCC
 GAGGGCGCAACCCACAGAATCGGCACCGACCGGTGGACCCGAACATGCGGATGGAA
 TGGTCGAACCCAGCACCCCGGCGCTCGCGGGGAGATCGGGAAGGGGGGGCGGCGCG
 GCACTGTCGTCATGGGGAAAGTGTAGTGGGCGAGGGGAGAGACGAGAGACAGAAACAT
 10 GCTTCTGCTGTGGCCTTCTTTTCGCTGCTCCACGTCCAACGGAGAAACGCGAACGCCAC
 GGCCTGCTGCACGAATGCGGhAGCCTCGCGCTCTGTAGAAATCAGAGCATCCAGACCCAC
 CCCACGCACTTGAGGAACACTGACCTGCACGCGCCATCACCGCAAGGTGCATAGCGCCAC
 GTTTAAGGCCCTGCCCTCTGGGGTAAGGGTTTATGGGCGGGGCAAAAAGCTAAAG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 234>:

15 GNMCJ43F gnm_234

CCCGGCTGAACAACCTGCTGCTGGTGCTGATCGGGCTGGTGGTGGTGGTACGGTGACGC
 TCGTGGGACCAACCTCAGCGTCACTGCTGATCAGCTCCAGCGCCCGCCGCCCTGCT
 CTCGGGACCTCGCGACCATGATGCTGCTCGCCGCCGCTCTGGGCATCCTCGCGGGGCT
 AATGGGCTGTATGCCAGTTATTACCTCGACACCGCCCGGGGGCGACCATCTGCTGGTG
 20 AACACGGCTATTTTTCTGCTGGCGCTCGCGTTTCGGGGGAAGTAAGGGCGCTTCCCTAAC
 CCTCACGGGCAACAAGGCAATTGCGCGTGTCGCGCT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 235>:

GNMCJ45R gnm_235

15 GTAATCCCAAGAACTTTGGGAGGCCGAGGCAGGTGGATCACAAGGTCAGGAGATCGAGAGC
 ATACTGGTCAACATGGCGAAACCCATCTCTAATAAAAACTACAAAAATTAGCCAGGCGGT
 GTAGCGCACGCTGTAGTCCAGCTACTCAGGAAGCTGAGGCAGGAGAATCACTTGAACC
 CGGGAGGCGAGAAGTTGAGTGAGCTGAGATCATACCAGCTGCACCTCCAGCCTGAGTGACAG
 AGCCAGACTCCATCTCAGAAAAAATAAAAAAATAATATATATATATATATATATATAT
 30 ATAAAAACAGTCTAGGATCAGACTTCAAGTTTCACTGAGCTGGAAGTGCTGCCAATGCT
 CCCCAGCTCTTTAGCAAAAGACATTTACACAGCATATTGTATTGGAGGCATTTGGGGAAA
 ATGAAGGAAGTGGGGAGCATTACAGGGTGCGAGTGACTTAACATCAAGAGCTAATTACA
 AGAGCCGTGGGCAATGACAGATGCCAAAAACAAGATGGAGGAATCACTTTTATATAGACT

35 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 236>:

GNMCJ46R gnm_236

CCTTCAAGGTGCCAGCTCTGGAACGAAGGATGCCCTTGGGAGGTGATGACACTCAGGTA
 CACGGGTGCTCAACAGATTGCTTCTCCTATCCTCAGACGGTCTTTGTCATGTCATGACGC
 ATTGGCACTCCCATTTGTGTGGAAGGAACACGCCCCAGGGTCACACAGCTGGTCAGCAGCA
 40 ACATAGCTGGTCTCAAAATCAAGGTGCTGACCATGCGCTCATGAGGAGACGCTCCAG
 GGAGTTGATCCTGGCTTTGGGGAGCCTTTCTGGGCTGCACGAATAACCTCATTTGTC
 GAGACCCCAACTCTGCTCAGATCTCTTCTCCCTATCTCTGCTGGGCTATGATCAAGG
 TGACTCTAGCAGCCCTTCATGGACATTATAGTACTCTCTGCCATTCACTTTTGTCTAAT
 CTGACTTCAACCCCACTTACTTGGTCTCTCTCTTTTACAACCAACACCAAGGAATCTAG
 45 GGCTGCTTTTAAAAATTATTTTTTGGAGACAGAGTCTCATTCCATTCTGTACCCAGGC

-676-

TGGAGTGC AATGGTAGGATCTCGGCTCACTGCAACCTCCGGCTCCGGGGTCCAAGGGATT
GTACTGCTCAGCCTCCTGAGTAGCTGGGATTACAGGCGTGTGCCACCATGCTTGGCTAA
TTTAAGTATTTTAGTAGAGACGGGGTTTACATGTTGGTCAGGCTGGTCTCGAATCCT
AACCTCGTAGCGCTGCCTAGCCTCCAAAGTGCT

5

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 237>:

gnm_237

CCTGGTACATTTACAAAAATTAACCTGACTTATTTTGTTCAGCAAAATCTCAATATATTT
GAGAGCAATCAAATCACACGACATGTTCTGATCATATAACTGTGCTAGAAGTCAATGAT
10 TAAAGCTAATTCAAATATATTTTGCTTGGAAATCAAAGTGCCCTTATAAGACATAA
ACATAAGAAGAATCCAAATGAAACAAGATTGCCTTCAACTCAATGATGAGATCATAA
CATGGCAATAAAATGTCTCCCTCTGCGCTGGGAATTCCTCTTTGTGGCACAAGGTTGTGT
GATCTCAATCACCCTAACCACCTAGACATTTAAACATCCGAAACCGAGTGATGACGT
CCTTATCTATATCATCTTACTGCTGTGTGTGGACTTTAAATTCGAAACCAAATGAG
15 GGGAGAGAAACCAAGTTGACTTTCATGACTGAGCTCTCAGGGACGCTCCAAAGGAATCTGTG
CATTTCAAGAAACAAAGTTCATCAGCTTCTCTCAAGGTATTTGCCCAACATACCCAGA
GGGCTTGGCAGCATCATGTGTGATGGGTGGGGAGCTCCAAGCAGGTGGGCAGGACCCAGG
GGCCTGGTGACAGGACAGACCCCACTGTCATCACCCTTsCTGGCCCTGTCTCTGTCT
20 AAACCTCCACAGGCTTCTGCACGATCACACAGAGTATGCCAAACTCTCTCAGGCCTC
TGCGAGCTGAAAACCA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 238>:

GNMCJ47R gnm_238

CGGGGGGAAAAAGAATAAAAGGATTAAAAAATACAACATGTATTTTGGGATGGAAA
25 TTCATCTGATATACACACGTTCAAGGTGCCAGATTAGTGCCCTATATCACACCCCAACA
CAATACACAATATGGTGCAAGCCTGTAACACTGACCTAGGTCATGAAGGAATTTAAATAT
AATAAACCAAGCCCTTTTACTACATACTTATATAAAATCGACAACATATCATGATGCT
CTATGTCAGGTAGCCTCAACAAATCAACATTTATTCTAGCTCTGATATGGTCTGGCTCT
GTGTCCCAACCCAAATCTCAGTTTATAAATTTATTTTTTTGAGGCAGAGTTTGTCTCT
30 GTTGCCCAAGGCTGGAATACAATGGCAAGAAGTGGGTCAACGGGAACTCCGCCCCCAGG
TTTCAAGAGATTCTCTGCTCAGCCTCCTGAGTAGCTGGGATTACAGGCATGTGCCACTG
TGCCAGCTAATTAAAGTATTAAAGTAGAGATGGGGTACTCCATGTTAGTCAGGCTGCT
CTCGAATCTGACCTC

35 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 239>:

GNMCJ47F gnm_239

CGGGTCAGGAAGGGATTCTACGGAAGTGATTTTCTGTGTGGCCTTTCTTAAGGGCAG
ATTATAATTATAACAGTTAAACTTTGTTTAAAGAGGCCGCACTAAGGTGACGTGGGA
40 ATGAAAGGAAGTGGTATTTAGTAGACATTGTGAGGAAGGTGAATGGTCTTGGAGAC
TGGTTTGGAGAGGGGAGGCAGACAGTAAGGGAAGGAATCCTTCAATAGTTGCTCCCTG
TGGAAATCGAATCTTGGTGTGCCATTAATGGTAGTTAGAAATATGAAGAGGAGGCTGGGT
GTGGTGGCTCAGCATGTAATCCAGCACTTTGGGAGGCCGAAGCGGGCGGATCAGAGG
TCAGAGAGTCGAGACCATCTGGCTAACATGTTGAACCTGTCTCACTAAAAATATAAA
AAATTTGGCCGGGTATGGTGGTGGGCACTATAGTCCAGCTACTCGGAGGCTGAAGCAGG
45 AGAATGGTGTGAACCTGGGAGGTGGAGCTTGCAGTGAGCCAGATTGTGCCACTCTGCTC
CAGCCTGGGTGACAGAGCAAGACTCTGTCTCAAAAAAAGAAAAAATATGAAGAA

GAGGCAGTTTGAAGAGTAGTTCCATCTTGCCAGGTTTCAGTTGCTGGTGGGCAGC

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 240>:

gnm_240

- 5 CGGTAGGTTTCAGTTCCAGCTCTGCCTCTTATTGACTGCAACCTCAGGCTTAACTTTCAG
TCTCTGAGCCTCAGTTTCACTCTGTAATAAGGTGGCTATACCATCTCAGGTTGCAGA
GAGAAATTAATGAAATATAAGTGCATGTAGAGCATTTGAACCCAGGGCTGGCACACACAG
TGAGTACACAATGTTAGCCAGGTAGCTTCATAATGCATACTGATTGTCAATATTCAGACA
ATGCAGTAAAGTGTACCAAAAATAAAGTAACTTTATGTCATATGTATCTTCTTCAATC
10 TTTTATTTTAAACAGGGTAAACATATGCATATTTTTCATAGCCAGTGTTTTCTCTTCA
TAGTATATTGTTAAAAATAATTTTACTTGGACCGGGTGCAGCGGCTCACACCTATAGTCCG
AGCAGCTTTGGGAGGCCCGGTGGGCAGATCACAGGTCAGGAGTTGACACGAGCCTGGCC
AATATGGTGAACCCCATCTCTACTAAGAAATACAAAAATTAGCTGGGCATGGTGGCACAC
ACCTGTAGTCCAGCTACTCAGAGGCTGAGGCAGAGGAATTGCTTGAACCCGGGACACAG
15 AGGTTGCAGTGAGCCAAGATTGCCATTGCACTCCAGCCTGGGGACAGAGTGAACCTC
TGTCTCAAAAAATATG
TGTGTGTGTATGG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 241>:

GNMCJ48F gnm_241

- CCTGACTCAATGTCACTCAATTGATTCTGAGTTCACTGCTGATTACATCCGACCAAATCG
CTTTTCTGAAGTCTACTCCGTTTAATCATGCTGGTGATGATTTTGTGCGCTCTGGGAC
AARCTCCACCTGGCTGAAGATAAAGCAATCTGCGGTGACTTAGTCCTCCTGTCAATTCC
25 CATCAGTTCCCACTCTCCTCCTCTGCCCCCACCAGTCTCCCATGCAGGCTGACACCAT
ATGACGGCCTTAATGGAGTCCACCAGATATTTACGTTCTCTCCTGGGCCATTTGAAAGT
GGATGTACCCATGGGATTTGCTTTGACCCAGGAGATGTGCGTGGAAAGTGAAGCGTGTAC
CTCGAGGCAAAAGAGTTGGGAGCCATTGAGACGGGCCACTCTCTCTCATCTCTTAGAG
CAGCTGACAGCTCCCATATGAGAGGCTGCTCCTTTATTCTGCTGGCAGGATGAGGGCATGT
GGGSCACAGGGCACAGGAGAGCCATGGAGGATGTGCAGCATGGGCAGGAAAGAGCCTTC
30 AGTGGTGTACATTTCCATAGTTTGGGGCTGTTTCTTACCTACAGTGATACCTGACCCATC
TCACAGGATGCACCATCTACTCCACACTCTGTGATGCAGACTAGCCTGCCCTCAGAAC
ACGAACTGGTGTGTCAGACACAGGTAGGTTTCAGTTCAGCTCTGCCTCT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 242>:

GNMCJ49F gnm_242

- AAGTAAGTTCGAAAAATACATTTATATGTCAACATTACTAATACACTTGGGGTAAGGTG
TATTTCTCAAATCTAATGTTTCATCCAGCCAGTCAAGGTGCTTGGAAATTTGTGACCCCT
CTCAGGCCAATAAGCCTTGGGCCTCTGAAGAAAACATTGGAAGAAAGTTTCAAGTGGGC
AGTCATGGGATGTTTTAGTGTGGAAGGGCTAAGAAAGAAAGAAATTTGTGACAACATA
40 AGATCACACTCTCGATGTGAGCAAAATGATTAAAGGGATTGTTGGCTATGAACCAAAA
ATCATTTAAGGSTATTTTGTACTGGAGAAGGCCAAGGACAAAAGATATAAAGTTTCCCA
TCCTTGGGATCATGAACCTCAAAGCAAAAGCAAAATGGATTAAATAGCTACTCTATTATTA
GCTACTTCTGTAAATAGCTACTTGAGCATGAGCAATGGTTAGATTTTAACTCTAGAGTTT
ACAGTGGAGAAATACACACATTTCTAGGATTACTTAACCTACTAGTCAACCTGTCCCTCTC
45 CTTATGATGTTGACCCAATGACACTAAATCCCTTGGGCATCATGATTTCTTGAATCGGGT
CTCCAAGAATGCTGCCAACCAAAAGGGGATCATGAAGAGACTGTGGGCCCTTGCTTCCAA

-678-

TTTTTCTCTTCTTCTTCTTCTTTTTTAAGTCATATGTGCCCTGACTCTTCTGGCCAGTG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 243>:

gnm_243

5 GTACCCTACTAAAAACAAAAATTAGCCAGGCATGGTGGTGCATGCCTGTAATCCCAGC
TACTTGGGAGGCTGAGGCAGGAGAATCACTTGAACCTGGGAGGCAGAGGTTTCAGTGAGC
CAAGATCGCACCATTGCACCTCCAGCCTGGGC AAAAAGAGCGAAACTCTGTCAAAAAAAG
AAAAAGAAAGAAAGAGAGAGAGAGAGAGAGAAAGCAGAGAGGCTACTGCAGAGAAAAATC
TAGAAGGATGGGTTTCATGGGTTTCATCGAGAGACAAATAGCTTAAACAACAGCACCATAG
10 TTGGCAAAACACTATCATTGAAAAAAAACATGCTCAAAAGGGGAAATGCCAGTTTGGGT
AAATATGCTTTTGTGGAGAGAAAGAAATTGGAACAGGCTTTTCAGACCCCTTAAGG
CCCAACAAACAAATTATAATTTAGACAAGTCTGGGATTCTTCACAGCTCAGCTTGTGGTG
ATGGTATTAGCTTCACAACTCCAAACAAAGTTAAGCTGTCTGTGTGAAATCTCCTCAACAA
CACCTCACTGGCAACCTGGAGGTGCTGAAAACAGAGCTTCAATTCTTGTTTGCAACCA
15 AGGGAGTTGAGTTGGCAGATGGGCACTGTGTCCAGCCTTGGGAAAGGACATCGCAGACTT
TGCACTCCTAAGAACTCATAACCACAAACGGCAAGGTAAGACACAAGCTCTTGAAAGTTTCC
ATCAGAGTGCAGCACAAATGACCTTGGCTATGTGCCCTGTTATTGCTGGTCCCTGCTTAA
AAATCTCCTGTGACTTCCAACCACACAAATTTCTACCTGGTTGCAAAAAATGCCCTTGAT
AATTCAACCCCTCCCTTATCTTGCCCTCTTACAATGTGGCTTGGCAGCTCCTCCATCA
20 AGAGTTAAAATCTATTTCTCACCCCTTGAATCTAGGCTGGCCATGGGACTTGCCTTGCC
CRATAGATGTGCAGAAATTATGGCGTGACAGTTCTAAGCATGAGTCTCAAGAGGCTTTG
CATGCAGCACTTTCTCTTA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 244>:

GNMCJ54R gnm_244

AGGCCAAACCCCTTAGGTTTTAGGTTTTTTTCTTTTTTTGAGATGGGAATCTCCCTCTG
TCGCCAGGCTGGAATTCACTGGCATGATATTGGCTCGCTGCAGTCTCCGCTCTCTGGGTT
CAAGCAATTTCCCTGCCTCAGCCTCCCGAGTAGCTGGGACTACAGAAGTGCACTACCACA
30 CCCGGCTAATTTTTCGTATTTTAGTAGAGACGGGTTTCACCATGTTGGCCAGGCTGGT
CTCAATCTCCTAACCTCATGATCCGCCCCACTTGGCTACCAAGTACTGGGATTTACAGG
CGTAGCCACCTCACCCTGGCCCAAGTATTGGTTTCTTAACAGATTTGGCATTGGACAGAA
CGGACCTGATAGAGCAAGATGTCAAAAGACTCCCTGACAAGTAAAAAAGGGGCCAGGCAT
GGTGGCTCACACCTGTAATCCCAGCACTGTAGGAGGCCGGGCGAGGTAGATCACTTGAGC
35 CCAGGAGTTTGAGACAGCCTGGCAACATGGCAAGACCCCATCTCTAGAAAAACAAAAA
TTAGTGAGCAGCAGGCTGTAGTCCCAGCTACTTGGGAGGCTGAGGTGGGAGGATCCC
TTGAGCCCCAGAGGTGGAGGCTGCASTGAACCAAGATCACGCCACTGCATGCTGGCTGGG
GTAATAGAGCAAGACCTATCTAAACAA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 245>:

gnm_245

40 CAGAACAAGAGGGGCTGGGAAGATGACAGCATGACTGAAGGGCTCCGCTGTGAAAGGAA
GGATAGCTGTGCCACAGGAGAGGAGAGCCACCCAGACACCAAGCTGAGACAAATCCC
AGCCCTGGGTTTCATGGCCAAAGTCACAGCCCACTCACCACCCCAAaWACATACCCCYT
GTGACATGTGGCTGAGCACCAGACATCTTCTCTCACCTTGGTGGGATACCTTTGCTGCT
45 GGGCAGGTGACAAGTCSGATACATACTGSGAGACGGCACTTCTCAGGACCTGGGAGATGT
CCTTGCGTTTCATGCTGCAGAAGGCTGSGTGCTGACCCAGCCAGCAGTGCSCCCATCT

GGCTGACATTGTTAGAAAGACAGCACCTGGAAGAGGAGCGGTGCGCAGTCAGGCTCTGCTC
CCGCTTTTACCTTCTCCAAGCTGCACCTCAGCCCATCTATGTGCCAAGTATAGGGATGGGT
GACACCTTAGGGGCACAGCAGTGAAGCAGACAGATGCTGCCTCCACAGGCCTTCTTCCT
TCTATCAAGAAAGAGAGTTGGCCAGGCATGGTGCTCAGCGCTGTAATCCAGCACTTTGA
GAGGCCAGGCGGGTGGATCACCTGAGGTCAAGAGTTCGAGACCACTGGCCAACTATGGT
CAACCCCATCTCTACTAAAAATACAAAAATAGCCAGGCATGGTAGCAGGTCTCTGTAAT
CCAGCTACTTTGGGAGGCTGAGGCAGGAGAAATGCTTGAACCCAGGAGGCAGAGGTTGCA
GTGAGCTGAGATTGTACCATTCGACTCCAGACTGGGCAACAAGAGCAAACTCTGTCAGA
AAGAAAGG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 246>:

GNMCJ56R gnm_246

GACTACAGGTATGCACCACCATATGCTGCCAGGCTGGTCTTGAACCTCCTGGAGAGAGAT
ACATACACACACACACACACACACACACACACACACACACTTTTTTTTTTTTTT
AGACACAGTTTCGCTCGTCACCCAGGCTGGAGTCAATGGCACATCTTGGCTCATTGCA
ACCTTGCCTCCTGGGTTCAAGCTATTATCCTGCCTCGGCCCTCCCAAGTAGCTGGGATTA
GTAAGGCACTGCCACCATGCCTGGCTAATTTTGATTTTTAGTAGAGACAGGGTTTTGTC
ATGTTGGCCAGGCTGGTCTCAAACCTTTCGCGCTCAGGTGATCCACTTGCCTCGGCCCTCC
AAGTGTGTTGGGATTAACAGGCATGAGCCACTGCGCCGGGCCATACATATGCAATTTAAAA
AATTTATTATTATTATTTCGAGACAGGCTCTCACTCTGTTGCCAAGCAGGAGTCAGTG
TGCTATCTCCAGGCTCAAGCAATCCTCAGCCTCCCGAGTAGCTGGGACTACAGSTGTGT
GCCATCACACCCAGATAATTTTAATTATTTTATTTTTTAAATTTTTTGAGAGATGGAG
TTTCCCGTGTCAACCCAGGCTGGATTTTTGTATTTTGATAGGCTGTACAGTTTCCA
AAGTTGCAACCTTCCCTCCTGAGAGTAGGG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 247>:

GNMCJ56F gnm_247

CTGTTTAAACACAGTAAGCAGGAGCTCGATAAATATTAGGAATCATATTACGCTAATTGTT
TTACAAGGTTTGCTTCACTTACACGTATAAATTAATGAAAAACATAGCATCCTAATGAC
TCTGAAGGTTAAACGCCAAGAGTGCTATGGGGTTAGGGATTTTAAAGTGGAGCAAAAT
AAGACTGCGAAACAAATACGTGTGTCGAAACAAATTTCAACACAAAAAGATGTAATATT
CAATTTGCCATGAGTGACACAGTTCGGCTGATAACCCACATAGCCAGGGAATCCCTTC
CAATTTTGAGACGAAGAAGAGGGAAGGAAGAGGGGTCAAGGCGCAGAAGCGATACCCAGG
CCTGGGAATCACGAAGACACAGTCGGGAAGTGGGCTCCGAACAGAGACATACT
CACTTTTCCAGGCCCCACCATGTCTATTACCCAGTTAGGAGGAATGAGCTCATTTCTGT
GAACGTGAGATGACCTCGACCCCGTGCTCTATCACAGCCATTAGCTTTGTCACACAT
CCTTTCAATCCGCTCCTCTAAGCGCGGTCTGAGCTTTGGTCCCAGACGCGCAGAAGGAA
GCGGCTGAATCTTACCAGTCTCGACGCGCCACGCTTTGACTGCAAGGACGAAGC
GCGCGCATCTCCCGACAAACAAGCTGTGAAGCAGCGGTGCCGCATT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 248>:

GNMCJ57R gnm_248

CAAAATTTGGTGCTTAACGAATATTGTTGGGTGGATGAAAGCAAGCACTGACTGTCAACT
ACTATCACTGGGGGTGATTAACTTTGTCTCTCATGCTGGGCCCAAGTCTGCACCTTAGTA
GGTGCATGGTAATAATAATAAATATCTAACACTTGGACAGGCATGGTAGCTCACATCTA
TAATCCAGCACTATGGGAGACCAAGGCAGGAGGATCACTTGAGGCTCAGAGTTCAAGAT

CAGCCTGGGCAACACAGTAAGACCCCTATCTCTACAAAAAATAAAAAATTATCCAGATGT
GGTGGTTCATGCTGTAGTCCCACTACTTGTGAAGCTGAGGTGGGAGGATCCCTTGAGT
CGAGGAGTCTGAGGCTGTAGTGAACCATGATTGCTGCACCTCCAGCCTGGGTGGCAGAGCG
AGGCCCTGCCTCTATAAAATCAAATTTTAGGCCGGGGCAGTGGCTCACGCCCTGTAATCC
CAGTATTTCTGGGAGGCCAAGGCAGGTGGATCACCTGAGGCCAGCGTTCAAGACCAGCGCTG
GCCAACATTGTGAAACCCGCTTTTACTAATAATACAAACTTAGCCAGGCGTGGTGGCCAG
ATGCCCTAATAATCCCACTGTGTCAGGAGGTGAGGCAGGAGAGTTGCTGTAATCTGGGAGG
TGGAGGTTGCAGTGGGCCGAGATCATGCCCTATACTCCAGCATGGGTGACACTCCAGCA
AGACTCCATCTCAGGGAATAAAAAATCAAA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 249>:

GNMCJ57F gnm_249

CCAGAAATCTGCCCCATGATCCAATCACCCTCTCACTGGGCCCCACCTCCAACACTGGGG
ATTACATTTCAATAAGATTTGGGTGGGGTACACATCCAACTATGTCAAATATAAAGTTT
AGTAAAACTTAGAAATAGCACCAACCAAAAAAGGGGTAGGTACACATACATTTTTTTT
GTTTTTTCTGAGACAGGGTTGTACTCCATCACCAGGCTGGAAGTGCAGTGGCATGCTC
TCGACTCACTACAACCTCAGCCTCCTGGGCTCTGGTGATCCTTCTGCTCAGCCTCCTAA
GTAGCTGGGATGACAGGCTCATGCCACCAGCACTGACTAATTTTGTATTTTAGTAGAG
ATGGGTTTCCACATGTTGGCCAGGCCAGTCTTGAGCTCCTGACCTCAAGTGATTGTGCT
GCCCTGACCTCCCAAAATGCTGGGATTACAGGTATGAGCCACACACCTCGCCTTAACCTA
CATTTTTTGTGATATTACCAGATTGCTCTGCTAATAGTGACAGTTTGCAGTCCCAAG
GAAAAATGAATGTGCCAGCATTAGTATTAGCACTTCATTTATTTTGCACATCTGAT
GGGTGAAAAGTGATTACTTATGTTTTTAGACTTTATTGGATTTCATTGAAGTTGAGT
ATCATTTTATAGGATCTATATAGAGACCATTAGTGGGACTAGGGGATAGAT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 250>:

GNMCJ59R gnm_250

ATCAGAGTCACTTCATCTCTGTGAAATTTGCAAAAGATGCTAGGAGGTTCCTCTCTGCT
GGGACACCCAGCCAGACACAACCATTAAATTCACAATTACATGGAGTTTCACTGTCTG
CAAGGCTGCTCCATTTAAGCTCTGGGTCATGAACACATAACTCTAGGCATACCTGACACTA
GCTGGAGATTTTCCACCAAAAAAAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGG
AAATAGTGAATGTGCTGGCTTATAGAATACCAGCCTGATTACAATGCTTGGTGTGG
AATGGCCAGCTCAGTGGTTGTAGAAGTCAGTAGGCCAGGCTTTGTGGCTCACTCC
TGTAAACCCAGCACTT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 251>:

GNMCJ59F gnm_251

CGCCAGACCGGGCTCCGCAAGTGTAGGCGCGCGGGGGCTGGGCGGAGGACTCACGGG
GCAAAAGCGCTGGGGAGCGGGTGGGCGCCACCGCTGGGCTCCCTAGGGAAGGGGTGCA
GGTGATGGATGGCGTGGGGGACAGACCGAGAGAAAGAGGTTGGGCAAAAGTGTGGGTGCA
CGGCTTTAAGGGCTCCTGGGATTGGAGGGCACTTGGAGGGGGGGACGATGAAACTTCGA
GAAAAGGGATCCAAACTACTTAGTAATATAATAACAGCGATGACAACCTGTGCAATAAC
TATCAACATGATTATTTGTATATAATATAGCAGCAGTAAACAACTAATGACATTAGTAAT
AATAGCTACGATTCACTGCATTCTTATATGTGCCAGTGTGGGCTTAGTTCCTTATGTAT
TTTATGTATAAGTAAATGCTACTCATACAGTTGTGTGGAAGAAATGAAAAATGCAG
GTAAGGCCGGGGCTCACACCTGTAATCCAGCACTTT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 252>:

gnm_252

```

CGGTACCCGACCATCATCATCGTGGGACTGACTTTGGTGGGAAGTCCTTGGTTACATGTCA
5  TTATTGCATTTCCGACAAGTTATAAAGTTGTCAATTACCCCTCTGGATAGTTTACCTTTGGG
TGAGTATACTAATCTTCTGTAGAGGTATCTTGTAATCACAATAAAGAATAAATATATATA
AAACAATTACATTTCTGGACTTCATTATGAATATGTGGTTTACCCAAAAAATCAGGGA
AATGATTTATTAGTATAAGAATTATGAAAACATCTGCCATTTGCATTATGAAAATTAAT
AGTCCGGTGTTTGTAAATAGAATGTCAACAGAGCTTTGGTCAAAAAAAGTTTTTTTA
10 ACCTTTGTGCTATTTATCACAATGGAGTATGAGTTTCGTCACTTAAATAGGAAATTC
TTCTAACTCTTCTGCTTTATAGTTCTATCGTAGGGTGGAGGAAAGCTTCCAATCTCC
TCTCTGAAGATTCACTGCAGAAATGAGCTGACAACAGACAGCTTAACAGGAAAAGAAAA
CATAGAACAGGCATAACATGGGAACAGCTGAAAAATGAGACTGTAGAGGGCCGGAT
GGCTGATGCTTAAAGAGCACCCCTCTTGTAGGGGAGAGGGAGATAGATGCAGATGTAGGC
15 CATTTAGAGGGGCAGCAATGATTTTAGGGGAAATGAAAGAG

```

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 253>:

GNMCJ61F gnm_253

```

CTGCTTCAGCCTCCCAAAGTGCTGGGATTACAGGCATGAGCCACCACACCTGGCCGTGAAA
20 TAATATCTTTCAAATTCCTTGTAGAATTTGTTTTTCTCGTATTCTGCAATAGGATATAA
AAAAAATCATGTACTAGGATTTCCGAGAGAGCAATGGGTAACTTAAAAAGATGAAAGA
GCAACCACGTCATCCACAGCTACTGCTAGATTTTCATAGGAAGGTAGCTGGCCAGTT
TGGAGCTAGGGGAAATGTCAAACACATGAAGAAATGAGAAGCCAAAGAAATGCCATCACGC
ATGAATGCTTCATGGCACCCATGATGTCCCTGCTAAGGAGGTAAATGGTATAGATGACTAG
25 ATGACAAGGACAAAGATGAGAGGTGCGAAGTTGTCCAAGTCCAACAGCTCAACTGAACTT
TCCTAAGTGGAAATGTTAAAAAGTGGTAAATTTAAAAAATTCACCTGGCTCAGCTGGTGG
CTCAGCTTGTAAATCCAGCACTTTGGGAGGCTGAGGTTGGTGGATCATTTGAGGTCGGG
TTTTGAGACTAAGCCTGGCCACATGTGTAACCCC

```

30 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 254>:

GNMCJ63R gnm_254

```

CGGCGCAAAATCACCTGGATGGGTGTGAAGATTCGACCATACCCGGAAAGACGGAACGC
GCATTTGAAACGGAAGCGCAGCGAAATGTGCAAACCGCACTTGGGGTGAAAACCTACCTGA
ACAGCCATCACACGCGTGACGATGGTAAACAGCGTGAGTTCCAGCCTTACATTTGAAGCGA
35 ACTGGATCAACAATAGCAAAGTCTACGCCGTGAAGATGAATGGTCAAAACCGTAGCCGTGA
AGGTGCGCGTAATCTCGGTGAAGTACGTACCGGGGTTGAGGCGAAAGTAAATAACAACCT
TAGCCTGTGGGGGAATGTCGGTGTGCACTAGGTGATAAAGGCTATAGCGATACTCAGGG
CATGCTGGGAGTGAAATATAGCTGGTAAACCGTATAAGCCGATGTGAGATGGCATGCG
GCTTAATATTGCCGACTTCAAACGGCGCATCAACGCCCTATTTAAATCCTCCTTTTTATC
40 CGCGATCGCGGATATCGCAGCGTTTATCCCGTAGAGCGGATAAGATGTGTTCCAGATTG
ACTTATCCTCACTAAAGGATATAAACGCATAATATCCCTTAAGCGGATAAACTTGCTGTG
GACCTATGACATGATGAGCTTTCAGAAGATCTATAGCCCAACGCAATTTGGCGAATGCAAT
GAACTGGTTCCCGCAGCAAAATGGCTGGACGCAGAGCGAGCTGGCGAAAAAATTTGGTAT
TAAGC

```

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 255>:

GNMCJ63F gnm_255

```

5  CCGGCTTAAACCGTCCATGCAACCTCAACACATTGCTTTCAACTGCCGTCACCACGTTCTC
   CGGAAAAATCTGTGCGTAATGAAGTCTTCACGTTATCCAGTGCTGCTGGAATCATTCTGGC
   AAAGTCACTCAGGATTTTCATGTCATCTGCATCTCCGGGAATCTCAGCACCTTTGCTGTCCG
   CAAAAAATGTCGCGGATAAATTTTATCGATTGCCGTTTTTTTGGCTTTGGATGCGTTAAG
   CCCCATTGCCAGTTTGAGATCGCTGATGTGATTCCCGTACCGCCAGGACCGCGAATG
10  TGAATGATGTCGTAATAATGGCGTGAGTCGATAACTGCCGCCAGCCTGAATAAATACGGA
   GAAGTTTTTTCATGACCGTCCGTTGCGCCAATCAACCACTGGAAGACCTGGAATTTTCAT
   AAAATCATAGCGATCTTTAGCGCCTCGCTGGACCCATCAAAAAAGCCATGATCCGCGC
   GATGCCGTGGGCTCCATCTGATTCATATTTACCGATGAAGGTAACCCGAATGTCTGACA
   CATATCCTCTGTGGCAAGCGAAGTAAACCGTTTCGCTCAGCATTCCAACGCTGTCAAA
   ACGTTTCAGCCGTAACGCGCGCACATTTCCCGCTTTAATGATTTCTGCGTCCGGAACATT
15  CAACCCAAATCTTTTCGCCAGCAGCAGACAGTAATACTCATTATCACCCTTTGGTCGAG
   ATCGAGCGTC

```

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 256>:

GNMCJ68R gnm_256

```

20  GTACCCCATACAGATCACCTGGGGATCTTAAATGCAGATTCTGATTGAGGAGCTCTTGGT
   TGAGGCCCGAGACTCCCATCTTCTCTCTTCTCTCTCTCCCTTGGGCTCCCAAGATG
   TTTGGATTACAGGTGTGAGCCATTGCGCCAGCTGACGCTGCATTTCCAACAAGCTTCCA
   GGTGATTCTGGAACCGCTGCTCTGGTGAGCACACCTGGAGCGCGAGGAGATAAAGCAGTG
   GTTCTCAAAACCTGCCCTAGATTAGTAACATCCCTGCCAGGTGCCACCTCAGAGAAATCT
25  GATGTTATTGTTCTGGGGTGTGGCCTGAGGTATGGCTGATTTTAATGCTTCTCAGGTGA
   TTTCAATGCAGCCAGGATTGAGAACTGGATTGCAGGGTGGTTATGAGTTCCCAAGACC
   AGATGAGCAAAACAGCTCTCTCATTTTCCTTCTCTCCATCTCTCTTCTCTCTCTCC
   AGTCAAGTCTCAATTCTACCCCTTCCATTCCACTTTTGGGCCCTTTTCAATTGCTT
   AAAATCGAAACGATGACATGAAATAATTAATGAAATTTTGATAAAGCCATCAATAA
30  TTTACAGCAGTATCCACACATCACCATAAAGTCCCAACACATTGACATTTGAGAG
   TGTGGTCATCTATTAGTTCAGCGCAT

```

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 257>:

GNMCJ68F gnm_257

```

35  CCTTTACTCTTCTTAAATATCTCTTGACCTCTTTGCACATTTCTATGATCATTTTAA
   TAATTTATTTATTGCAATATGCCTGCCTAATGATAGTAAAGTGTGCGTTACAGCTGCTTT
   CGGTAAGGAATGTGATAAGTCACCTACTATACAATGAGCTCTGTAACAAAAAACAGAA
   TGGTTCATATTTTAACACCCGAATTTACGTAATAACGTAGTCATTTCAGGCAAGTGACAA
   AAACGGGTTTCTGGCAATATTGAAATAGCCACTGGGGGCGAGAGTGAAGTAGAAGAA
40  ACACTCTGCAAGCGCTGGGTTCTCTAAGTTCGGCACTGCCTTACCTAGAATACGTT
   TCCACATCTGTAACCAAGGGGTGGACTACAGTGCAGCTCCCAAGTGTGGAGCACAC
   CCAGCGGCATCTGCAACACCTGGGAACCTGTTAGAAACGCAGATTGCCAGGCTGTCCCG
   GACCTCTGAATCAGAGCTGGGTGGGGCTCCGAAATCCAGGATCCCGAGCTCCGGGT
   CACAGATGGGGACCAACCGGACCCCTGGCTGTAGGAACAGCCACAGCAGGAGGTGAGC
45  AGCAGGCCAGTGAGCATTACCGCTGAGCTCTGCTCTGCGAGATCAGAAGCGGCATTA
   GATTTCTCTAAGAGCAAACCTATTGTGCACTGTGCA

```

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 258>:

GNMCJ71R gnm_258

5 AAAGTTGGAGGGTACTTTTGTGATGGGTTTGGTTTAAATTTGGTTTAAAAATAAAGACACA
TAGTCCATAGAGAATTCACCTATGGACTATGCTGCTAAGAGAATCTCAAGAGATGCACCT
GTATATGCTCCAGAGTTTGTGAGAGGCCACTAAGGTCAGGAGACACATGCCATATATATC
AAGATGCTGTCAACAGAGAAAACCAAGTGAGGTTTCAACAGAAAGCCCCGCTCCATTCAAC
CAGGCAGCCACTCCTCATTTGCAGGTGCTGACCTGGGGCTTTGGCTGCTTCTCACATGGGCA
10 ACTCTATACACTCTATTCCCTGGGAGAAGGGCAGCAAGACCCACTTATTAATATGATGTTT
AACAATCCTCGGCCGGCGCGGTGGCTCAGCCCTATAATCCCAGCACTTTGGGAGGCCGA
AGTGGGCGGATCATGAAGTCAGGAGATCGAGACCATCTGGCTAAC

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 259>:

GNMCJ73R gnm_259

15 ATTTTCATGGACAGCAACTCATCTTCCTGGTTTTATTTTTATTTTATTTTGACACAGG
GTCTCACCCTTACCCAGGCTGGAGAATAGGTGTGATCAGGCTCACTGCAATCTTGACCT
CCAGGCTCAGGTGATCTCCCACTCAGCCTGCTGGGTAGCTGGGACTCAGGCATGTG
CCACCATGCCTAGCTAATTTTTGTAGTTTTTTTTTTTTTTAGAGGTGAGGCTTACCATG
20 CTGCCACGGCTGGTCTTGAATCTCGGGCTCAAGTGATCCTCTGCCTTGGCTTCCAAA
GTGCTGGGATTAAGACATGCGCCACCGCACAGCCCATCTTCCATTTTTATAGGAAGGC
TGCTGCATAATTTGGAATCTTTATGCTGGGCTGCAAACTCAAAGGCATAGGGGGTAAGA
TAGGCAACAGAAATTTGTATCGAGTGCTTACTGTATGCGTGGCACTGTTCTAAGTGCTT
TACATATAACACATTTAGTTTTTCAACCATCCTATGAGGCGATTTTATTTCCATTTTAT
AGACAAGAAAACGAAATACAGAGAGGTTAAATAG

25

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 260>:

GNMCJ73F gnm_260

CCCTCTACTAAAATACAATTATTAGCCAGGCATGGTGGCTTGTGCTGTAGTCCCAGCTA
CTCAGGTGGCTGAGACACAAGAATCACTTGAACCCGGGAGGCAGAGTTTTCAGTGACAA
30 CAGATCGCGCTGCTGCCCTCCAGCCTGTACGACAGAGCAAGACTCTGCTCTTAAAGAAAA
AGAAAAAAGAAAGAAAGCTAAACACAGGCCACAAAGGGACCTTTTCCCTTTTATTTA
TTTATTTGAGACAGAGTCTCGCTCATACACAGGCTGGAGTGTAGTGACGCAATCTCGGC
TCATGGCAGCCTCCGCCTCCGGGTTCAAGCAATTTCTCTGCTCAGCCTCCCGAGTAGC
TGGAATCAGAGTGATGCCACCTGTAGAGATGGGGTTTACCATGTGGGCCAGGCTGGT
35 CTCGATCTCTTGACCTCGTATCCGCCTCCCAAAGTCTGGGATTATAGGCATGAGCCAC
TGCACCCAGCCTATTTTATTTATTTTGTAGACAAGGTATCAGCTCTGACGCCTAGGCCA
GAGTGCACTGGCGCAATCTTGGCTTACTGCAACCTCCACCTCCCGGTTCAAGCCATTCT
CCTGCCTCAGCCTCCTGAGTAGCTGGAATCAGGGCACATGACACCAGCCTGGCTAAG
TTTGCAATTTGAGTAGAGCAGGGTTTACCATTGT

40

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 261>:

gnm_261

TGAATAATGATGTGTTTGTATTTCATAATCTATGTTGTGCTCAGTGTTCAGTGGAAT

AATAATTAATGATGGTAACTTAGATTCAATGTGAACCTTGAGTAGGGGTACAAGTTCAAAA
 TCTGTATAAAAAATCTATATTAATGAGAGAAGAGGCTGGGCGTGGTGCTnCACGCCT
 GTAATCCACGACCTTTGGGAGGCCAAGGCAGGAGGATTGCCGGAGGTCAGGAGTTTGAGA
 5 CCAGCCTGACCGACATGGTGAACACACATCTCTACTAAAAATACAAGATTAACCGAGCG
 TGGTGGCGGGCACCTGTAATCCAGCTACTCAGGAGGTTGAGGCAGGAGAATCGCTCAA
 CCGGGAGGCAGAGATTGCAGTGAGCTGAGATTGCACCACCTGCCTCCGCGCTGGGTGAC
 AGAGGCrCTCCGTCTCGAAAAAAGAGAGAGAGACAGAAGAGAATTTATTAG
 10 GAAATCTAGGCAATAAACAACAGAAATTAACCTTGAGCGCTCCTGGCTACCAAGCAGGT
 AGGTGAGGATTTATTTATTTGATGGATGTTGCTTAAAGCCTCCTGTGCTCCTAGAGCAGT
 CAAATTATAGAGACAGAAATAGAATGGTGGTACAGTTTCGATTTTGCAAGGTTCAAAA
 TATTCTGGATATGGCTGGTAGTGACGTTGCAGG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 262>:

GNMCJ77R gnm_262

15 CCATTACACTCCAGCCTGAGGTGACACAGCGAGACCCTGTCTCAAGACGAAAAAGTTCT
 ACTTGCACACCTCCACACAACCTAGTGCAATTCTTGGTATGTCAAAAATACCAAGATGAGA
 ACTGCTGATACAAAAATACAGTGGAAACACAAAGAAAATGTCCTTTGTATCTGGGAAAGGA
 GGCAGGGGTGAGGAAAGCTTTAAGAGAAAGTGATGCTTCAGCTGCTTTAAACAGTAAC
 20 CACAGTTGAGTCTTTTCTGGAAGTTCTGCTCTTACAGAAAGAAAAGATGATTTACAGAA
 AACTGAAAAATGTTCAATATCGCTGGCATGTATAGTGACCAAGCCAAACAGATAATAAATC
 TGGGGACAAAGAAGCACCAATAGACCATGGAGGGGCTTGTAAACAGATCTGTAACATA
 GAGAGATCTGGAAGTGTGGGAAATGACTCAATGAAGGAACAAACCATGTGCTTAGAGAGA
 ACCAGGGAAAGCTCCATGAAGATGGAGCCAGCCAAAGTGGACATGATAAGTTTGGAG
 25 CATCTATGATGATTCTGGGTAAATGCATCTAACAGACAGTTAAGAACCAGTCTAGGCCG
 GTGCAAGTGGCTCAGCTCTAATCCAGCAC

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 263>:

GNMCJ77F gnm_263

30 CCGAACAGTCTCTGACTCAAAGTAAGGGCAGTAATTGTCATCTGTTTGTGTTCCAGC
 TGACTGTGCTGTATCATTTCTCACTACATTTAAGTCCACTGTTCTTATCACTGTAGTAA
 TTACCTCCAGAGATTACCATGTTTTTTTTTACATGCTGATTTCAGTGGACTTTTGTG
 AGACAAAGTCTCCTTCTGTACCCAGGCTGGAGTGCACTGGTGATATGGGCTCCCTG
 CAACCTTTTGCTTCTGGGTTCAAGCAATTCTCTGCTCAGCCTCCCAATAGCTGAGAT
 35 TACAGGCACCCGCCCATGCTGGTTAATTTTTTTATTTTATAGTAAACGGGGTTTCA
 CCATGTTGGCCAGGCTGGCTTGAACCTCTGACCTCAGGTGACCTGCCTGCTCGGCCCTC
 CCAAGTGTCTGGGATTACAAGTGTAGCCACTGAGCCAGCCCTCAGTGGACTTACTTTTT
 TAAAGCTTGTATCTTGTATCAGCCGACACTGTTGGCCACCCACTTCTTAAACTTCAG
 TGTTTCTGATCCTCTGTCTTCTGATCCTTTAATCTCTCTTTTTTTTTTTTTTTTTTT
 40 TTTTGCTCTGTCGCCAGGCTGAGTGCAATGACGCAATCTGGCTCACTGCAAGCTCCA
 CCTCCCGATTCAAGTGATTCCTACCTCAGCCTCCCG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 264>:

GNMCJ86F gnm_264

45 CCTTGCTTTTAGGAAGAAATAATAGATGGAAGCTATCTGAATGGTAATGTGCCCCCTTG
 ATCTCCACTTGCTCTCTTAAGATTTCAACAGAAATGTAGCTGTGATCTCTCTGGAATG
 ATTCCTTTTAAAGATGCTTTTCACTTTTACTCCCAATTGTAGCACTGCTGGATCTCATACA

GTTTCAPAGGTAATAATGCCCTAGAGGAGAGGGGAAGGGATGGTATAGATTTTAAATAAAA
 ATTCTTAAATGGAAGTCTCTTAATTGTAAAAAGTAATATGTGCTCATTACAAAAAATGTCA
 ATCAATGCACAATGTGTTAAAGTCAACAAACACCCCTTGCTCCACGGGCATCATTCCTCC
 TCACCTAGCATAAAGGCCAATTTTTTCTTTTTTTGAATGGAGTTTCGCTCTTTGTTC
 5 CCAGGATGGAGTCAGTGGTGCTATCTTGGCTCACTACTGCAACCTCTGCTCCGGGGTT
 CAAGCAATTTCTCTGCTCAGCCTCCTGAGTAGCTGGGGTAACAGGTACCTGTCAACATG
 CCGGGTAATTTTGTATTTTAGTAGAGATGGGTTTTACCATGTTGGCCAGGCTGGTC
 TCAAACTCTGACCTCAGGTGATCTCGCGGCTCAGCCTCCCAAGTGCTGGGATTACAG
 GTGTGAGCCACCGCAACCGGCTAAGAGCTGAA

10

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 265>:

GNMCJ88R gnm_265

GTACCCGTCTAAATTTGCCGTCCTTGAGGTAGAAGGCAATTTGGAGTTTCTGTTTT
 AGAAAAAACTACAGATGACTACTGTGCACCTGAAAACAGCACTCAGCTTCACTAACGA
 15 GACATGCAAGCTAGAAATCAAATTGCTGTTTTGTTTTGTCCTGCTGCTGATTGTGTAGCTG
 AAACCAAAATCACAGGCTCTTTTCTCCCTCTGATTAGCTCAGCATACACTGAGCTTACA
 AACGTATGAACCTCAGCTTGTGCGGAATCTTACAGCTGCTACTTCTTAAGTATCCTTT
 AGAGAAGCTGCCTTGGTGACCAATGAATGTGGTAGCCTAGTGATACTCTCTGGGCCAT
 20 ATACTGTGTGACTATCTGCATGGACCTTTATTGAAAGCATTCTTGCAAAATAATTTTTTA
 AGTGTTTTTTAAATGTGTATAATTGTGCTTTTAAAGATATCTTACACTTTTCACTTAT
 TTGTACCTTTAAAAATCTTTTTTTTTTTAAACCAAGGTTTGAGTATCCTCAGAGTCT
 GAAATTTGAGCGGATAGTGATGAGCCAGCAAAATCCCTGAAGATT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 266>:

25 GNMCJ88F gnm_266

CCAGTTGAGACCACTCTGGCTAACSTGGTGAAACCCATCCCTACTAAAAATACAAAAAT
 AGCCAGGTGTGGTGGCGCATGCTGCTAATCTCAGCTCCTTGGGAGGCTGAGGCAGGAGAA
 TCACTTGAACCCGGGAGGTGGAGTTGCAGTGAGCCAAAGATCGCACCACTACACCCAGC
 CTAGGAAAAAGAGTGAAATTTCTATCTCAAAAAATAAAATAAAATAATATGACAGTAAT
 30 CTCTGTTTATTAACACATAATGTGCCAGGTACTATTGTGGTCAACCTGCAAGACATGG
 ACCCCACCACCAAAATTTGTTTTAGATGTCAAGACTGATGATACACCACATGCACCAAG
 AGGGTAGGAAAAGGTTTATTGCTCATATAATGAAGCTTTCTGAGAGAGCAGGGCAGATT
 CCAAGCAGGTCCAAAAATGGTTTCAGAAAAACAGGCAAGGAACTCCCTTAGCATTTATG
 GTGGTTAGGGATGGGGATGGGGATGGGGATGCGATGGGGATGGGGATGAATGTGGGTCT
 35 GGTGGGAGGCTAGGGCTGTTGGGTATGAATTTCCAGCTGGTGCCAGGAGGAGAGCAG
 CAGGCTTCTTAGCTTGGCCAGATGTGGGGCAGAGGGGGAGAAGGAGGTTGAAGATGTT
 AGCAGTCCCATATCAGAAGTGGAGGCAGACTGTTT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 267>:

40 GNMCJ90F gnm_267

CGGAATGAAGTAATCTCTTCAATTGATTTTTTTTTTTTTTACTTATGCTGAGATTAA
 TGACAAAGATTTCATATAATCCAAGAGAGAAGTAATTATGAGGGATCTTTTACCATGT
 GATATATAATAATGCATCCAATGTTATACATCAATTTAAAAACAAAGTAATAACTTTA
 AAGAAAGATAAATCTAGTGGCCAGGTGCAAGTGGCTCACACCTGTTATCCAGCATTTGGG
 45 AGGCCAAGGCAGGTGGATCATGAGTGAGGATTTGAGAGCACGCTGGCCAAAGATGGTGA
 AACCTGTTCTACTAAAAATACAAAAATAGCCGAGCGTGGTGGCAGGCGCTGTAACTCC

5 CAGTTACTCAGTAGCTGAGGCAGGAGAATCGCTTGAACCCGGGAGGCGGAGGTTGCAGTG
AGTTGAGATCATGCCACTGCAATCTAGCCTGGGTGACAGAGCAAACTTTGTCTCAAAAC
AAAAAGAAAAGAAAAGATAAGATAATTACTTTATACTTAGCTTGCTTACCACATGATGA
CGGGCTGCATGTGGCCGAGGACAGTTTGAATGCAGTTCACACAAATTTGTAACATTTTC
TTAAACATTAGAGATTTGGCCAGGTACAGTGCGTCAATCGCTGTAATCCCAGCACTTT
GGGAGGCTGAGGCGGGCAGATTA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 268>:

GNMCJ91F gnm_268

10 CcNtGTCGCCAGACTGGAGTGGAGTAGCATGACCATAACTCAGTCATTGCGGAACTCC
CATGCTCATGTGATCCTCCTGTCTCAGCCTCCTGAGTAGCTGGGACCACAGACATGCATC
ACCATGCCCTGGCTAATTTTAACTTTTTGTAGAGACAGGATCTTGCTTGCTATGTTGCC
CAGGCTGCTCGAACTCCTGGCGCTCAAGCGATCCTCCTGCTCAGCCTGTCCAAATTTCT
TAACACTATACTATTCTGCCTCCTATACTAATCCACAGAAATAAATTTCTTTATCAAA
15 TTAACCTTAAACAGACCATTCATTCTCAAGACAGATAGTCAGAAATACAGGATCGAT
CTGTGTTTCATGTAATACTGGCTCCTTCCAGTTCCTTATCCTCAGGACTAGAGT
TGAATCCAGGTTGCCTCCTTAATCAAGAGAGACACTTCCTTAAAGAAAGCCCTTGTGA
TCTCCAGCATGCCCTGGGCGAGTGTCTTCGCGTTGGACCATCTGCCAGAAGCGAAGCA
CAAAACACATTTCTAAAAATGCATTGAGCTTTGAGGAAGGGCCAGGCACTACATCACAG
20 CCAATAAAAATCCATCAGAACCGCTCAGCAACCTTAGGAAGTGGAGAGTAGCATCATCCCC
ATTTACAGGTGAGGGAACAGAGACTTAAAGTGTGATGAGT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 269>:

gnm_269

25 GTACCCCATGGGTACAGAGGAAAAGCAAGAAAAGGAGGATAAGGATGGGTGCGTAGGAA
GACAACCTTCCAATTACAAGGCAGAGTAGCTCTGACCTCTAGGAACAGGTGAGCCCTa
aGAAAGCTCCCAAGGGATGGAAGCAGGTTCTCCTAACCATCTCAAGGCACCCCTCTTAG
GGTGATTGGCCAAATAGGACATGTTCCACCAACAGCTCTCAAGAGAAAGACAGTCTGGTGG
ACTTCAGTATTCCCTGATGCATCCAGTCAAGTCCATGGGTGAATAATTTGTTCTTTGGG
30 GAAGGGTTTCAACAGCATCCTTGTCCAAAGATATCTTCATGGGCCACTGAAAGAACTGG
CCTCCTAGATAGGTCTATTACCTTTAAAGGGTTTTTCTTCAGCTTTAACAGATACAATA
GRTTTGGAAATGCARAATGAAAAAATGACAAACCTACAAAAAGAAATCAAAACAGTATACAA
CACTGTCTCTATCCACAAAAAATAATGGATCTTTAAGTGCAACCACACAAAGAGATGAC
AAAAGCCTTACATACAGGGTTTTATATATAAmmhAGGAGACACTTTATTCTAAAAACACC
35 ACTTAGAATATAAACATCTTGACAGAGTAGGAATTTTATTCACTTTAAACATGCCA
AAAAATGATGGGAGATATTTCTGACTTGAGACAATGCTATACTCTTTTTTAAGCATGATA
TTAAAGTACTCGGCAAAATTAGGCTACTACATAAGAGAAATAAATTTAGCTCTTG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 270>:

GNMCJ95F gnm_270

10 CCTGCATCCAGCCTGGGCAACAAGGGAGAACTGTCTCAAATAAAATAAAATAAAT
AAAATAATGTAGATCTTGAAGGGGGTTGGTTTTATGCTGGTGTATGTACTTCCAAAGT
ACTAACTTACACTTAAGGTTATATATTTTGGCCAGGCGCGGTGGCTCAGCCTGTATATC
CCAGCATCGGGAGGCTGAGGCAGGCAGATCACGAGGTCAAGAGATGGAGACTATCTGGC
45 GAACATGGTGAATCCCATCTCTACTAATAAAACAAAAATAGCCAGGCGTGGTGGTCTA
CTAAAAATACAAAAATTAGCCAGGCGTGTGAATCTGAGCTACTCAGGAGGCTGAGGCAGG

-687-

ACAAT1GCTTGAACCCAGAACGCGAGGTTGCAGTGAGCCGAGATCTTGCCACTGCACTC
CAGCCTGGGCGCAGAGTGAGACTCTGCTCTAAAAAAGTCACTC
AAACCAGATGACACAAATCCAATGGCATTTCACTTTGGTTGG

- 5 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 271>:

GNMCJ96R gnm_271

CTGCATGACTCCGCCAAAATCTATCGCTTCCGGTTTCGCAGAGCATTGATGAGCTGATG
GAAGCTTGTCTGTCGACGTGATCCGCAAAAACAATCTCACCAGCGCCTATATCCGTCGCGTG
10 ATCTTCGTCGGTGATGTTGGCATGGGAGTAAACCCGCGCAGCGGATACTCAACCGACGTG
ATTATTCGCTGCTTCCCGTGGGAGCGTATCTGGGCGCAGAAAGCGCTGGAGCAGGGGATC
GATGCGATGGTTTCTCCTGGAAACGCGCAGACCTAAACACCATCCCGACGCGCGGCAAAA
GCGGCTGGTAACCTACCTCTTCCCTGCTGCTGGGTAGCGAACGCGCGCCACGGTTATC
AGGAAGGTATCGCGCTGGATGTGAACGGTTATATCTCTGAAGGCGCAGGCGAAACCTGT
TTGAAGTGAAGATGGTGTGCTGTTACCCACCGTTACCTCCTCCGCGCTGCCGGGTA
15 TTACCCGTGATGCCATCATCAACTGGCGAAAGAGCTGGGAATTGAAGTACGTGAGCAGG
TGCTGTGCGCGAATCCCTGTACCTGGCGGATGAAGTGTATTATGTCGGTAAGCGCGC

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 272>:

GNMCJ96F gnm_272

GTTCGACGGCTGGCATAAGCAGCAGGCAAGGAGACCTGACGTTACAGGATTTTTCGCGC
TCCAGGCTTTGTCACTCGAGCGCTCTGGCGTTTCAGACGCGCGCGCAGTTTCGCGCATCGC
TTACCTGTAAGTGAATGCCACGGTTCGGGATGTCGATAGCGATCAGGTACCATCTTCAA
TCAGGCCAAIGCTGCCCGGCTTCCGCTTCCGGTGAGACGTGGCCGATGGAAAGACAG
AGGTGCCACAGAGAAACGACCGTCGGTGATCAGCGCACAGGCTTTGCCGAGACCCATTG
25 ATTTCAGGAAGCTGGTGGGTAGAGCATTCTCGATCCCGGACCGCGCTTTCGGGCGCTT
CATAGCGAATTACTACCACATCTCCGGCGACAACCTTACCGCCGAGAAATCGCTTCTACCG
CATCGTCTCGGCTTTCGTACACTTTCGCGGGCCGGTGAATTGAGGATGCTGTACCGTA
CGCCTGCCGTTTTACGATGCAGCCGTTTCCGCAAGTTACCGTAGAGCACCGCCAAAGC
CGCGCTGTTGCTGTAGCGGTGTTCCAGCGAGCGGATACAGCCATTGGCGCGATCGTCGT
30 CCAGCGTATCCCAACG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 273>:

gnm_273

GGGGGATGAAACACAGCTCCCGTCCGTGCGAATAGGGGCGGTGCTGTCGTTTTTGTACACA
35 AAAACACGTTTGGACGGAGAAACGACCAAGGCTGGCCGGCTTCCCTCCGGAACACAG
TTTACGCTCACGCAAAATCCACCGGTGTTGGCGCAAAACACCGCCCATCTGTGCTTCAGC
CACCAGCTTCGGCGACAAACAGCGGATCGGCTGCTTGCCTGCGCGCGATACGGGCGAT
GAAAGGCGGTGGGCATTGTTGACCGGTTTCGGGACGAACCTGGAACATTGGAATGCAAGT
CGGAACGCTCGAGTCGAAAGGTTGACCGGGCACAAAGCCTATTGGCAGGCGGTAAAA
40 CAGCGCAATATCGAAGCCGATACGCGGGCATTTCCGATATCGTGGTTCTGCGAGCTTGG
CGGCAGGATGCGGAAGACTTCAACGAAGCCTATTGCCGCCATGACGCCGCAAAATGAAC
ATACCCGGAACATTGGCATATTTCGCGGAGACCGATTATGATCAGCGAGAAGCAGTAC
GCGCTTGAACGTGTTCAACGGCGACATCGGACTGATTATGGAAGATGTCGGACGGCAGGGC
AGGCTTGGCGCCTATTTCGCGATGCGGACGGATTAAAAAGGTAGCGGTAAAGTCGCTG
45 CCCGAATTTGAACCCGCATTGCGCATGACCGTCCACAAAGCCAAGTTCCGGAATACCGG
GAAGTATGCTGCTGCCGCTTCCGCGCACCTTCGAGCAGAGGGGACGATGCATTGTCC

GGATTGAGTAAGGAGCTGTTATATACCGCCATTACCCGCGGAGAGAGAAGTTCGTATTC
 TTCGGCGGGGAAGAAGCCTTCCGGCAAGCTGCCGCCACCGTCAAAACGCGTCAGACGGCA
 TTGGGCAGTATGCTCGAGCGGTTATTTTCAAGAATAATCCGCCGAATGCCGCGCCGC
 CGCCCCCTTATGCCTTTTTCAAACGGTATAGGAAAGTGSTTTCCCGGGTTCGGCGAAAGC
 5 AAGCGGATCGCTCGGATTCGCGGCTTTTTTGTGCTTCGGCTTGGTTTTCATCATTCGGC
 AACACGCAAAACCGCTCGAGCAATGCTTATCCAGAAATCGGATGGACGCAAGTCGAC
 ATGTTCCGCAAGATCGAAATGATCAGCGGATTTCTCCGTCGGGATTCAGATGTTTCCG
 CGCATCCCGCAAAACGCGAGCAGCATCGCAGATTCCGGGTCGTATACGCGGATTCGAC
 10 GCGGGAAGTCGGCTTGGCGGAAGCCAGGCGGATTCGACAGCAATCAGATCGGCAAAACCC
 TTCGGGAACAGATCGGTTTCCCGTATCTCAACCTGTTTTTCAAAGCCAAACGGGCAAT
 ATTGGCAGCGGCGCAGGCGCAGCGCTTTCGGATTGGTATCCGTCGCCATGACGGAAGGAAT
 GCCTGTTTTCGCCAAATGCGCGCAAGCAGCGGAGCCTGTCCCGATATCGAATGCCGT
 CTGAAACCCGTTGACGCGCATGGCGAGCAGGTCGAGGTATTCGCCGCGCAACGGCGA
 GAATACGCGGAAAGGAACGTGTATGCTGCCGCCAGCTGCGGAACGGCAACCCCTTTCTT
 15 ATGCCACTCGTGCACCCATAAACCCCGACGACAGATTGAGCGGCGAGGAAACCGGTTT
 CCGCTCCGCTCTCCGTACACGTGAGCAAGCGGAGCGGTATATCGGGCCCGGCTTGGT
 GTCCAACCAAAACCGGGCGGATTTCAACGGCAAGCATATTCAGAATACGGCTCTGCTG
 CGCTGCTTTCATACGTTGGCATGGAAAGGGCGGCGATATCCGCATCGGAACGGGCGCG
 GGCAGGTTTGGCAACCCCTTCTTTCATTGCAAGAACCTGTTTGGCATTTGGGAAATCT
 20 GCCTTGCTAGACAGTTGCAATATTTTATAGGACGCTTCAAAATGCCGTCTGCACCGCT
 TCCGGGCAATATGCCAACCTTTGGCGGCTTTTGCAGACTTCGTTCCGCGCATTCGAA
 CCGCTCATTCGGGAAAAATAAAGAAGCATGGGATACCTGCGTCATGTTTGAATAATAGG
 GCGGCGAGAACCGCAACCATACGGATCGTACAGCAAGGAGCGGCAACACAGAACAGTTT
 25 TTGTTCCGCTTGTCTTCCAGCCCATGCCGCTCGAAGCGGAATGTTTCAACCGCAATG
 TCGCATCAAACTCCATAAATAAACACATATGCTTGAATAATACCTTCAACCCCAATG
 ACGGAAATAACCGCAATCTGTAGACACAGAGAGTACCTATGACACAAAAGAAAAGCA
 CTTTGAAGAATTCGCCGCTTGGCAACCCCTTCTTTCGGGATGTCTGCTTTCGCCCA
 TATGGTTCTGCCGCTGTTTTCGGCAGACCGAAATCCATCGCCGACTGGAAAACGCCAT
 30 TACCCGCGAGGAGCGGTTTTCTGTTCGCGCAACCGATGCGCGGCTAGAAGAACCGAT
 TGCCTCGGACCTGTATCAGACCGGTACGGTCGCACAAGTCTGCAAGTGTGGAACCTACC
 CGACGGCACGGTAAAAGTATTGGTCGAAGGGCTGTATCGCGGACGTGTTCTGACCATTGA
 AGACACGGCGCGTCTGTTCTTTCCATATAGAGACGGTCTGGAAGAAGACACGGGCGCA
 CAATACCGACCTCGAAGCCGTGCGCGCACCTGTTGGCGAGTTTGAACAATACGCCAA
 35 ACTCAATAAAAAAATCCCGCGGAAATTATCGGCAGCATCAACGGCATTGCCGAAACAG
 CCGGCTAACCGATACGGTCGACGCGCATTTGCAGTTGAAACTGGCGCAACGCCAACAGAT
 TTTGGAATTTCCGAAATCGGCAACGGATGGAATTCGTGTCGACAGCTGGATTCGGA
 ACTCGACATTATGAGCGCGAAAACGCATACGCGGACCGTCAACGCCAAATGGAATA
 ATCCGACCGCGAATATTATCTGAACGAACAGATTAAAGCGATACACAAAGACTGGGCGA
 40 AGAAGCGAAAAACGGCAACTGGATGCTTGGGAACAGATATCAAAAGCGGGATATGAC
 CAAAGAGCGGAAGAAAAATGCTGTCCGAATCAAAAGCTCAAAATGATGCCACCGAT
 GTCTCGGGAATCCACCGTCGTACGCAACTACATCGACACTTTGCTCGGCTGCGGTGGA
 GAAATAATCCCGCTCAGCAAAACATCGCCAAAGCGGAGCTGTTGCTGGATGCGGACCA
 CTACGGCTTGAAAAAGTCAAGAACGGATTTTGGAATACCTCGCGCTCAAAAACGTTAT
 45 GGCAAACTCAAGGCGCGATTCTGTGCTGTTGCGGCTCCGGCGTGGGCAAACTCT
 TTTGGCGAATCCATCGCCAAAGCAACGGGCGGAAATATGTCCGATGCGCTTTGGGCGG
 CGTGGCGGACGAAAGCGAATCAGGGGACACCGCGCACCTATATCGGCTCTATGCCGCG
 TAAGATTTTGCAGAATATGGCAAAAGCCGGCTGAAAAAACCCCTTGTCTCTCGAAGA
 AATCGACAAATTGGTAAACGACTTCGAGGCGCATCCGCGCAGCGGTTGCTCGAAGTGT
 50 CGATCCGACAAACAAACAGTTTTCGCGATCATATGCGGAAGTGGATTACGATTTAGG
 TGATGTGATGTTATCGCCACATCAATAGTCTGAATATTCGACTCCGTTGCTCGACCG
 TATGGAATCATCCGTCGTGCGGCTATACCGAAGACGAAAAATCAATATCGCGATGCA
 GTACCTCGTACCGGAAGCAAAAGGCGCAACGGTGAAGAAAGAGGGGAATTCGCAATGGA
 AGAAAGCGCGGTGCGGATATTATCCGTTATTACACCCGAGAGGCGGGCGTGGCTTCGCT
 55 CGACCGGAAATTCGCAAAATCTGCGCAAGGTGGTATGCGATACCTTGAACGGAAGA
 TAAGAAGAGGTTGCTGAAACCAAGAAACACGAAAGCCAAACCTAAAGCGGTTAAAGT
 AAATGAGAAAAATCTGCACGACTATTGGGTGTGCGCGCTTCGATTACGCGCTTCCGCA
 AAGCGAAAAACCGTATCGGCGAGTTACCGGTTTGGCTGGACGGAAGTCGCGCGCAATT

5 GCTGACCGTCGAAGCCGCGAGCATTGCCGGTAAGGGCGTGATTCA GTGCACCGGCCAGTT
 GGGCGATGTGATGAAGGAATCCGTGTCCGAGCGCTGGTCGGTTGTCCGCTCCCGTGC
 ATCAGTGGGTTTGGCTCCTGATTTTACGAGAAAAAGACATCCACATCCACGTTCCCGA
 AGCGCGCAGCCGAAAGACGGCCCTAGTGCGGGTATTGCGATGACCTTGGCGGGCGGTATC
 10 TGTCTTTACCAAAATCCCGGTACGCGCCGATGTGGCGATGACGGCGAAATTAACCTTGC
 CGCGGAAGTTTGGCCATCGGCCGTTTGAAGGAAAAACTGTGGCCGCTTGC GCGGGCG
 CATCAACACGTCCTGATTCCGAAAGACAACGTCAAGACTTGGAGAAATCCCTGAAAA
 CGTGAAAAACCGGCTGACCATCCATCCGGTCAAAATGGATAGACGAGGTATTGGCTCTGG
 TTTGGAAAGCCAGCTGAGCCTTGGCGAGAACCTTCTGGTGC GGAAGCGGCGCGGGAATC
 10 CGCTTCAAAACCAAAACCCCGCAGCAGGCGAACCAACATTTGAAACGAGGAAATGTGTT
 GTAAAAATGCGGTTTCTGCTCTGAAAGCTGTCAATAGGGTGATTCCGTATTTTTCGTT
 GACACGGCAATTTCAGAATTGCTATAAAGCGAAATGTCTCAAGCAGTACAAACCCGG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 274>:

15 **gnm_274**

AAAAATCCCGCTATTCCCGCGCAGCGGGAATCTAGACATTCAATGCTAAGGCAATTTATCG
 GGAATGACTGAAACTCAAAAAAATCGATTCCCACTTTCGTGGGAATGACGGAATGTAGT
 20 TCGTGGGAATGACGGGATGACAGTTTCCGTATGGATGGATTCTCATTTCCCGCGAGCG
 GGAATCTAGACATTCAATGCTAAGACAATTTATCGGGAATGACTGAAACTCAAAAAAATCG
 GATTCCCACTTTCGTGGGAATGACGAGTGGAAAGTTACCGGAACTTAAAAACAAGCGAAAC
 CGAACGAACTAGATTCCCACTTTCGTGGGAATGACGyGGWGCAGGyTTCyGTATGGATGG
 ATTCTGCTATTCCCGCGCAGCGAAATCTAGACATTCAATGCTAAGGCAATTTATCGGAAAT
 GACTGAAACTCAAAAAAATCGATTCCCACTTTCGTGGGAATGACGCGATTAGAGTTTCAA
 25 AATTTATTCTAAATAGCTGAAACTCAACGCACTGGATTCCCGCTGCTCGGAATGACGAG
 TAGAAGTTTACCGGAACTTAAACAAGCGAAACCGAACGAACTGGATTCCCGCTTTCATG
 GGAATGACGGGATGACAGTTTCGTAGGAATTACGTGGTGCAGGTTTCCGTACGGATGGATT
 CGTCATTCCCGCTCAGCGGGAACTTAGACATTCAATGCTAAGGCAATTTATCGGAAATG
 ACTGAAACTCAAAAAAATCGATTCCCACTTTCGTAGGAATGACGGC

30 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 275>:

GNMCK14F gnm_275

CCAAGAAGTGACGGAGTTGATGTGCACAGGACTATGTAAACGGGGTTGCCGTTTAAACC
 CATACAAAGAAAGAGCCAGGGCAGGAAGTTACGAAAGCGCGCACACATTCCGGACAG
 35 GCGCGAAGTTGACACATTGGCGGAAACCGTAGCAGAACCTAATGTACGATAATTGGGA
 AGAACCGGGGAAACCGTTTGAAGGAATCGGACGGGGCGCTGGTCGGATCGGCAAACTGAA
 AAAAAACGCAAGAGAGAAAAAGACCCGTAACCGTTTGAATATAGACGGTTTACGGGTC
 TTTGTTTCGCGCAAGCAAGGGCTAAGGCAGTCAGGCAGCAAACTCCGCAATGTATTAAA
 ACAGACGCGTAGAAATGCCGGCTGCCTGGAGCGTTTTTCTTTATGAAATATCATCCTAGC
 40 CGTATCAAGGCTGTATGAATATGTTTTTACCAATGAATATAATCGGGCTGGACATCTCA
 AAGGACACCATAGACGCAACATTGCATAAAACAACGGAAGTATCCATTACATTAAATTT
 AAGAAT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 276>:

gnm_276

45 TTTACCTGCTCTTTTAATTGCAGCTTCATCAATTTCGATGACACCTTGACGGTGTGCCTGC
 TCTGCGGCTTCTGTGGTATCAACAGGCGCAGGGCGATGCGGCCGCTCTTTTCTTTTGT

AGGCCGAGATAGCCGGTGAGCTGTGTGTTGCCGCGTGCGAATTTGATGGATTCCGGGCAGG
 GTGCCGATGTCCCATGCGGTTGACGTTTGCAGCGCTCAAATTTCTGGGTGTTGTCAACGGAG
 GTAACGCGCGCAGCTTGACCGAGTTGTTGTTGCAATTCGTGCAGTTTGCAGCGCCCGGCA
 AGCTCTTGTCCGCGCTCGTCGATAATGCGGAGGTTGAAATAGCAGTGTTCGGGCAGCCTG
 5 AACCGGCGCCATTCGTCTTGGTTGATTGCTCGAATATGCGGATGTCGCTCGGTTGGT
 GCGATGGCTTGGCGAGTTGGGCGAGGATGGGCGGTTGCGGTGCGGCATTTCGCTTTCGT
 TCCACCGTATTCAAATACCGATGAGGGGCGATGATTGTCAACCAATCAAGACAAG
 AATCCACCGTTACCAATTACAGCAATAAAGATATTGCTACAACCGCAATAACAACAGCT
 TGGATAGCAAAAAAAATTGCTACAACCGTTGGTTGGCG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 277>:

gnm_277

CATTAATAAATAAGTTTTCTTAATTTTTCTTAGTGCTTGTTTTTATCTGCTTATTTGTT
 GCAATGCCGCTCTGAAGCAATGTGCGTTTCAGACGGCATTGGAAATTCAGTTGGGCAGGG
 15 TATCGGACGGTACGGTTCCGGCTCTTCTCATCGTAGCGCGCATTTCTATCAATCGG
 GCAAAACCCAGTTCCGCCAGTTTCGCTCAGCGCGCGCAGTTCTTCCAAGCTGTCAAACCGCA
 AATCGCTGAGGAACGTTGCCGTTGTGCCCCACAATGCGGGTTTCCCAATGTGTCGCGAT
 GTCCGATGACTTCAATCCACCCCGATCCTGCAAGTCTGCATCAGTTCTGCGGACCGC
 CACGCGCGGTATGCCCTCGATGTGCCGCGCGGTACGGGCTGTGTTAGGCGATAATCGC
 20 CAGTGGTTCCATCAGCGCGCGGAGTAGCGCGCGCACCGCTGTTCTTCAGGCTGCCAC
 CCGCTCGAATGCCGTCTGAACAATCTGAAACCGCGAGCCCTCTTGGGTATGCCACGATTG
 CAACGCCCTATCCTGCCAACCGGTTTCAACTGCGCCACAACATCAATCAGTTTGTCTTG
 CGACAACGGCGGCACACACAGTTGCGCATAGATTTTTCGGTCAAGCGTTTCGTTGGT
 CAGCAGTGGCGCTTCAATCAGCGCGTCCGGAGAAATTTTTCGGTCAACGGGTATCCGT
 25 GCTGAAACGGCATGGGTTTGGATATGCCGTCTGAATCGGTTGGATAGAGAAGCATGTC
 CTGAAAAATATTTTTAGACGGCATTCTTTATGCTCCGAAGCTTCTGCCCTTACGCTC
 TGCTTTTCTGGCTTCGCGTATGGCTTTGAGTTGCGCTTCTTCTGACGGGCTTTTTTGG
 CCAAGTTTCCCATTTGGTTCCGCGTTTCGAGGGTGATTCTGCGGATTTTGGCTTCACGGAA
 GTCCGTGAGGATGTTTTCCGCGGCTTTTGGTAGTTGATCCGTCGCGCGCTGAGGACATGC
 30 TCCGCGTTTTTGGCTATCCATTCCAGCCAAACGTTTTCTGCCAGTGGCTGCTGGGGCTC
 TTTGCTGGCTTGGTAGCGTTCTTGAACATAGGAGGATGTCGCGCGGAGGTAGCTCAA
 AAGTTTCGAGGGCGACTTCTTCTCGTCCAAACGCGTTGCGTCCGACTGCGCGCGCGCGG
 AAGGTTGTAGCGCCTTCTTCGAGATGATTTTGGCCATAGCATTCGGGGGGTGTGCTA
 GAGCCAGAAGTCATCGCGGAGGAAGAGCGGTTTGTTCGGCTTTGGTGATGCCGGTTTCGT
 35 CCGCGTTTTTGGCGGATTTTTTGCTATCATGCCCTTGATGAGGGTGGACTTGCCAAAGCT
 GGGGATGCGCGAGATGAGGACGCGCAGGGGTTTATCATGCTTGGCGGTGGGAATCAT
 GGCACGACAGGCTTGGTAATTTGCCGTGTGCGCTGTTTCGGAGGAATCGAGGCGCAT
 GCGCGAGGTGTCGGGCGGCTGTTATAGTGTTCGAGCCAGATTTTGGTGCCTCGGGGTC
 GGCAGATCTTGTGTTGAGGATTTAAGTTTGGGTTTACCTTTGGAACCTGGGCAAC
 40 CAGGGGTTTTGCTGGAGGCGGGCATACGCGCTCCAGCATTTCAATCAACATCAAC
 GCTTTTGCACGCTCGCGATGGCTTTTTTTCGCTTGTTCATATGCGCGGAAACCATG
 GATTGCCATGCTGTTCTTTCTTCAATATTTGAAATGCCGCTGAAACGGAAGACCGG
 GTTTTCAGACGGCATAATGGTTTGAACGAAATAGCGGCTGACAGGTTTTCGGCTGTCTG
 TGCCTGATCAGCAATTCATACGCGCTTTCAACCTTCGGGCGAGTTTTCGACAATATAG
 45 ACCGAACGTTGCTGCTCCTCCGCTGCAACCGATGGCGACGGTAACGTAGCTCTCTGTC
 TCCTCCAAACCGGTAACCAATCGTAACAAACCTTTCGATGTGCTCAACCAATTTCTCTG
 ACAAGCGCTGTCCGTCCAAATAATCCAAACGGGCTTGTCCATACCGGTTGAAGCGCTC
 AACTTCGGATCGTAATACGGGTTGGGAGGCTGCGCATATCGAACAATAAATCCGCGTTG
 TTCGGCACCGCTATTGGAACCGAAGGACTCCAAATACACAGCAGCGCGCTAGCTTCG
 50 ACCTTGAGCCACTGCCGAGCTCATGGCGAGCTGTGGGCATTATCTTGAAGTGTGCG
 ATACAGGATGGCGATTTCTTTAAGCGGGAACAGCCATTCCCGTCTTCTTTAAGCTTTCC
 AACAGGTCATATCCTGATTGCTCAGAGGATGTCCTCGCTGGTTTCGAAACCGCGG
 ACCAACACGCTTTCTTCGCGCTCGACAAACAAACTCAACCTGTGCCCCAGTCTGCGG

AGAGAGGCAATCTGTTCCCGCGCCTGTCCGATGTCAATGCCGGAACGCACATCGACGCTG
 ACCGCCAATTCGGTTTCGTCCGACGTTTCGATATGATACGACACGAGCGGGGCAACATT
 TCCAAAGGCCAAATTGTCCACGCAGAAATAACCCGAATCTTCCATTGGCGCAGTGGCAGC
 GACTTGGCCGAACCGGCAGGCGCGTAATCAGGACGATCTTCATTGTGTTGTCGTTTTC
 5 TTAAGTTGCGTCTGATGGCGTTCCAAAAATTGCGCGTACTGTCTTACCGCGCAACTG
 CAAAATGTAATTGCGTACCGCCGCTCAACCAAAACGGCGAGGTTGCGTCCGACGGCGAC
 GGGCAGCGTAACCGAACGGACGTTGACGTTGAGGATGGATTTCGGTTTCGGTGCAGATGCT
 CAACCGGTCGAAGTGCTTCATATCTCGTCTCCGCTCGACTAAATGATAAATGAGTTG
 CAGGATTTTTTGGGGCGGATGGAAGTTTCGCCGAAATAATGGCGGATATAGATATCCC
 10 CAAGCCGCGCACTTCCAAAAAATCGCGCAGCATAGGCGAAACACGCCCTTCCAGCGTTTC
 CCGGCGCATGCGGAACAGCTCGACCGCATCGTCGGCAATCAGGCTGTGGCGCGCGGAAAT
 CAGTTCCAATGCCAATTTCGCTTTACCCAGGCGCGAATGCCGGTAATCAGCACGCCGAT
 TTCAAACACATCGAGAAATACGCCGTGTTGACGCGAGTATGCCCAAGGTGCGTTGCAG
 GTAAATCCGCAACACGTCATCAGATAGGGGCTTCGAGTTTGGAAAGTCAGCATGGAAAT
 15 ATCGTTTTTATGACAATAGTCGCGCAGTCCCGGGGAAACGGCAAGCGGTTTGCCACAAAT
 AACCAAGACATAGAAATATCGAACAGGTGCCCAAATGATAACCCGTTTCCCOCGATTC
 GAGGCGGTTTCAGATATTCGACTTCGCCAAACCGACCACTTGGATTGGTTGGGATGAAT
 GAAATTCAGGTTCGCGACTAGGGCGAGGACGGGCTTGTCCGCTCTACGCCGATAGTGTT
 GTCCGACCGCAATTTGCCGGCGGCCAAAGCGAGTTGCAGTTTGTATTGGTTGCATCAAA
 20 CAGGCGCGGCGACGAGATACTGGCATATTTACTTTCAGTCAGGATGGCAGCGCACTTCTT
 CGCGAGAGGAAACCGTCATCAGCGATTCTCTGATGCTTTTTTGGGAAAATTCGCCGGCCA
 GTTTGGATAAGACTTCCAAATGCTCCGCGTTGCGTTTTTCGGAAACGAGCAAGATAAAAA
 TCAGGGAAAACCGGCTTCCGCTCCGGTGCGTCAAAATCCGACGGGTTCGCGCGTCGCGATGA
 ACGCGCCGCTGCGCTGCTTCACGCCGGCATGACGGCGCTGCGGGATGGCAACGCCCTGCC
 25 CCAAAACCGTGAAACCGAGTTTTCACGGGCAAAAAGACATTCGAAAACATCAGCATGGAT
 ACAATGAGGATTTCGCGTTCCAAAAGCAGGCGCTGCTCTCAACACGCCCTTTTTTACTGTC
 TCACTCCCATATCCAAAACAAATATGGGCAAAAGGCAAAATTCGCGGATAAGGCTCATAA
 GCTTCTCTTTTCAGACATCGCAAAACAGAAAGATTGTACCGACTGCGCGGGCAAAATCTCA
 ATCCCGCATACGGTACGGGCTGACATAACACAGCGTTTAAAAACATATTTTAAGCGTTT
 30 TCGGCACAGATAGAAATGCCGTCCAAAGCAGTTTACGGCTCTTCAGACGGCATTTGCCCTG
 CTTATTTCGCGGAAAACGATATGGGCAAAAATGGCGGTAAACACACCCCAACTATCTG
 TTGTTTGCCAAAACGTTTCAAAACAGATTTCGCGGACGCGGCTTTTGATGGCGGCATAT
 TGGCGGTATTGCGCAGCAGGACGATGGGGATTGCCGTCCAATATGCCATCGCCGACCG
 ATAACGCGACCCCAATCTGCCATCAGCAGGGTAAAGCCTCCGTCGACACAGCATAAACGGG
 35 CGCATGTCTGAACGCCCAACGTCAGCGCGGAGGTTTGATGCGGATTTTCAATCGTCT
 TCTTTGTCCGCTATTGCATAAACCGTGTCTATACGCCAGAGTCCATAACACATTTGGCGGCA
 AAGAGTATCCAGCTTGAGGCGGCGCTTTCGCGCAACGGCGGCAACGCCATCCGGGATA
 CCGAAGGAAAAGGCAAGGCCGAGATAGAGTTGGGGAATCGGAAAAAACGTTTGGTAAAC
 GGGTAAGTCAGCGCAAGAAACAGCGCGGGCAGGCTCATCAGCCAAGTCAGATGATTCAAG
 40 GGAATCAGGCACAAATCGGCAAGCAGGCACAAAAATGCGCTCAGCAGCAGCGCTTCTTTT
 TTCTTGACCTGCCCTGTGCGAACGCGAGGTTTTTTGTACGCTCGACAGCACCGCTCAAAA
 TCGCGGTGCGCAAGTCTGTGATAGCAGCGCGGCACTTCGCGATTAAAAACGTGCGGATT
 GTAACGCGCGCAATACCGCCAAATCGGAATGCGGCTGAAGCCAGCCCAATGCCCAG
 TAGGTGCGCCACAGTAAAAGCAGCGTCCAATGGGCTGTGTCGCGCCGATCAGGCGGAGG
 45 TACACATCCAAACGTCGGACAGGCTAAAAATAAAGGGGATTTAGGATTCATATTGCCG
 CGCAGCTTGAAAAAACGCTATTTTATCCGATAAAACGTTTCAGTTTCGGGAGAAAAATCT
 CGGTACAGCACTTCTCCTCGCGTGACGGGAAACCGAGAACGCGCGCGGCAAAATACC
 GTCCGCACTCTTCGCGCGCAACGGCAAACTCAACGCCGCAACGCGCCCTTCCAATCGG
 CTTGAAACAGACGCTCGCCCAAGGACGCGTCCGCGAGTCCAAAATGTTTGGCAGAAAAC
 50 CGGAACCGCATACGCGATTCTGCTCTTGCTCAACACAGGAGATACGGTCAGGTTCAACA
 AAATCTCGCGCACCAAGCTCTCCTCGCATTCCTGCTCCAATTGCGCCAGTTTCAGCAATT
 CCACCGAAAATGATGCGGCAAGCGCGCAATCGGCGGTGACGACCGGGTGTGACGCA
 GCGCCACCATCGCGAGGCTGATGCCGTCTGAATGGCGGGCGGCAAGTCGGGCGAGCATT
 55 TCCCAATAGGTGTTCCATATTTTCCCAATCTTATACCGCGTCTGTTTTTGGCAACTC
 CATCCATTCCGCTTCGAAAAATCGGCTTTCAGACGGCATTTCAAGTAGGTCAGGCTGTC
 TTGGCGATGTGTGCTCGCGGCTGTGCTGGATGTGGTTGAACACGAGGCTGTGCAAGG
 AATGCCGTATTGTTGAGCGCGGCAAACTGAGTAAATGTGGTTGATCTGCCGAGCGG

5 TCCGCTGGTAACGAGGATGACGGGATAGCCTTGCTGACGGATATAATCAATGGTTAACAG
TCTTTCCGTGACGGGAACATCAATCCGCCGCGCCTTCGACCAAAACGACTTCGTACTG
CGCCGCCAATCTTGTGTGGCGTGGCGATTTTGTCCAAGTCCAAAGCCCTGCCATCCAG
TCGGCGCGGCGAGGTGAGGCGAAGCGGGATAGCTGAAGATTTCGGGCATAGTCAGCGCCG
10 TTTGTCGCGCTTCTGTCATCGGTATGCCATAATTTGCGGTGGACGGCGATGTGCTCGGCG
AATGTTTTGGCAACCGGTTTGACAGGGCTTTTGGGTAAATCAGCTTTTGCCCTGCTGCA
CAATGTTTGTGCAACACGCGGTGGCGAGGTTTGGCGATGTCCGTGTCTATGCGCGCT
GACGAAGTAAACGCTTTCATTGTGTGTTCCTTCAAGATTGACAGGTTTGTGCGGA
AGTTTGGTCAAAACGCGCTGAAATGATATAGGGCGGCATCAGATACACCAGCCTGCG
15 AACGGCGCACCCAAATGCCCTGCGCCACGCGAGTCGCTTGAAACGCGCCATATCCAGC
CCTTTTTCCAGCTCGATCACCCGATGGCACTTAAACGCGCAGCTCTTTCACGCGCGGA
ATGTCCCAACGCGGCTTTCAGACGGCCTTTAAGATGCTTTCAATGCGCGCGGATATTGGC
TGCCAGTCTTGAGACAAAAGCAGTTTGACCGAAGCGCAGGCAACGCGCACAGCCGACGGG
TTTGCCATAAACGTCGCGCGGTGCATAAACACGCGCCTTCGCGCGCGAAATGTTTCG
20 GTAACTTTTGGCGAAGTGATTGCTGCCGCGCAGCTCATATAGCGCGCGCTCAAAACCTTG
CCAATACACATAATATCCGCGCACGACCTCCGCGTGTTCGACGGCAAAACATCTTGCCCGT
CGCCGCAATCCAGTGGCGATTTCGTCAAAATCAGCATGATATCAAAATCGTGACACAA
TCGTGCAATCCGCGAAGATACTGCGGATGATATAAATACATGCCGCCGCGCGCTTCAGC
ACCGCTCTCAAAATAAGGCGGCAATATCCGATGATGCACTTCAAAATAGGCGCGGCA
GGCTGCAAAATCCGCGCGTCCCATTCATCGTGAAGACGGCTTTTCGGATTATGACAAAA
25 TAACGCTCGGCAACGCGCTGCCGAAATATGGTGCATCCCGCTTCCGGATCGCAGAGC
GACATCGGCTTCCAAGTATCGCGTGATACCGCGCGCGCAGCTGCGGATATTCGCTTC
GCCGTCAAAACCCGCGCTGCTGGTATTGCACTGCCATCTTCAGCGCAACTTCCACCGAA
ATCGAACCCGAATCCGCATAAAAAATACGTTTCAGCCCTCGCGCAAAATCCGACCAAC
AATCTGCCAGCTCCACCGCTGGCTCGTGCCTCAAAACACCGAACATACAGTGGCGCAT
30 TGTTCATCTCGCTCTCAACCGCTGATTCAAAACAGGATGATTGTAGCCGTGTATCGCA
CACCACGAGGAGGATCCGCTCAATCAGCCGCGTGGCTCCGCCAATTGATATAAACAGC
CCTTCTGACGCTTTGACAGGATAAACGGCGAGGATCGGTCTAGGAATATAGGATGATA
AGCAGATGGGTGACGCTGCAAAATCAAGCAATGATGATATGTTGATGTTTCAGACGCGATA
35 AGTTTCTCTGTTTTCTTCTACTGTATTCAAACGCAAAACGCGTATTCTACTCCGACAGA
CCGTTTTCCACACCTCTCCATCCGTTTTGGGCGCAAAACCGCGCAAAACATCGTCCGAG
TATAAGGCGCACCCGTTTCGCATTCCCAAGCCGATTGGAATCAGACGCGCCAACCGCC
AATACCGTTTTACGCGAGCTCCGCGCCAACGCTTCAATCAGTCATAGATATAGTGGATTAA
CAAAATCAGGACAAGCAACGAAGCCGAGACAGTACAAATAGTACGGCAAGCGAGGT
40 AACGCCGTACTGTTTTAAATTTAATCCACTATAAAACGGCAATCCATACGATACAGATCA
TAGCAACAGCCCTCGCAACAGCGTTAGCAAAATCAGGGAGCTCCGACATAGGCGCATAGC
ACCTACCGATGCACGGCTCTCATTGCGTCTATGAATACCATACCAATCACAAAATCCA
CGCGCAAAACAGGCGAGGCTTCTTATACTTATGATAGATTTCCACCATCTGTCCCAT
TATACCAACATTCATACCGTATATCCCGAGGCAACAAATTCGATTGAAGGTTACAGC
45 CCTATTTTATAGTGGATTAAACAAAATCAGGACAAGGCAACGAAGCCGACAGCAGTACAA
ATAGTAGCGGAACCGATTCACTTGGTGCTTACGACCTTAGAGAAATCGTCTCTTTGAGCT
AAGCGGAGGTAACGCGCTACTGTTTTGTTAATCTACTATATTTCAAACCGGAAAAAT
CGCGCTGTGAACCTTCAGACGGCATCCATTATATTTATTCGTCTTTTTGTGTGATG
50 GCGTTTCGGGAACGATTGCGCGGTGAAGGCTCTTCAACGATATATTCCTCCCTCGATAATA
TCGTCATCGCGGAAAAGCCCTCTTTCTGCCGATTGGTTTCATGTTGAAAAAATTTTCC
GCACCTCTGCTGCAACACTGCCCTTCCCTTAAACGGCGAGCAGCAATACCGCGAAC
ACCGAGGATACGAATCCCGGACTCATCAGACACAGCGCGCACCGGTATACCGGATAGGC
CACAACTGTGATAACGGATACCTCCGCGCGCTTCTATTGCCGCGCGCCCAATAAA
AGACCGCGACAGCCCGTATGCGCTGAGCATCAGCACGCGCGCGCAAAACCTGCCGCGATC
55 AAAAAACAGCTCCAGCGCGCGCGCAGCAATCGGCAACCCACACAATGCAGATAATCTCC
AAAAACAGCAGCACCAAAAAACCGATACCGAAAAATCTCATTGACCGTATCTTATATT
TAAGTAAACAGCAAAACCGCGCAACAGGACTCCAAGCGAGCTGCCTGTAATGATTACAA
AACCATGTGCTTCAAGCGGAAACATGTGAAATCTCGCAATATAGTGGATTACAAAAAC
CAGTACAGCGTTGCTCGCCTTAGCTCAAAGAGATCAATTCTAAGGTGCTGAAGCAC
AAGTGAATCGGT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 278>:

gnm_278

```

5  GATGATGATCTTCTATAGAAATAAGCCTGCCAAACTGGGTTCCGGGCGAGCTATCTGATT
   CGGGATTTTTCCCGCCACATCACTTCTATCCATGCATCCTGTAACGGGACAGTCCATGCGC
   CTGCAACAAATTGCCAAAAACCGCTGGCATGCCGCGCGTAGCGGGCGAGTGGCAAAATG
   CGCTACACCGTATATGCATTTCGATTGTGCGTTTCGAGGTTCTTCTGACGACAGAAAGC
   GGTTTTTTTGACGGATCGTGCGCTGTTTTTGAAGTCGAAGGAACGGAAACGCTCCGCGAC
   CGCTTGAATTTGACGGGTATTCGTCGGAATGGCGTATTGCCACAACGCTGCCGGAAACA
10  GGGAGGTTTGTCTTTTTCAGGCGCATCTTATGCCGAATTGATTGACCGACCTGTCGAGATT
   GGCTTGATTGAATTTTATAGATTTTGAAGGCGGAGGCACTTCGCGACACAATTTGCCTTAAGC
   GGCATATATCCCGATTTTCAGCGCAACAGGCTGGTTTCGGATATCAAAAAATTTGTCTGCTCCAC
   ACAGAACTGGCGGTGTTTTCTCCTCCCTGCCCGTTTCAAAAAATATTTGTCTGCTCCAC
   GTCCGCGACCATATTTACGGCGGTTTGGAAACACACCGACAGCACCGCCCTGCTCGCCGAC
15  CGCCACAGCCTTCGCGCGTACGGTATGACCGATGCCGACGATACCTACACCAATTGCTC
   GGACTTTTCTCCACGAATATTTTACGCGTGGACGTCAAATCCAACCACTTGCCTCGCGT
   TCTGTCCTTATGACCTCGACAAAGAAAACATAACGGAACACTATGGGCATTTCGAAGGT
   ATTACATCCTATTACGACGATTGTTTTTGGCAGCGAGCCGACCATCTCGCCCGAATCT
   TATTTAAACCTGCTGGCAAAAGGCATTACGCGCGTACAAACAAACCGCGCGGCTTTGAGG
   CAGACCTTTGGCGGAATCGAGTTTACCGCGTGGAAACAATTTTACAAACCGGATGAAAAC
20  AGCCCCAAGCCCATCTGCACTACTACCGAAAGGCGCGCTTGCCGATTTGCCTTGAT
   CTGATAATACGCAACCGAAGCAACGCGCAGACATTCTCTCGATACGTTAATGGACAACTC
   TATCGGAGTGGAGGGACACACACTCGGGTATTCCGGAACCACTGGCAAAATCCGCTGT
   CAGGAATATACCGGCTGGATTGGAAGATTTTTTCCAAAGCGTTATACAGTACCGAA
   25  GATTGCGCTTGCCGAATGCCGTGGCAACCGCAGCGGTGGGACTGACCTTCTGCGCGCTT
   CCGCGCAACACCGCGCGGATACGCAAGAACACATCTGCCCGTCCCGTGGCAGGCGAT
   TTTGGCGCAGCTTTCAAAACAAACACCGACACATCGTCTGACCCATGTCTTCAACGGC
   GGCAGCGGGAATCTCGGCACTGTGCCGCAAGACAAAATCATTTGCTTTAGACGGTTAT
   GCCTGACCGCACTTTACCGCACAATGGGCCGATACCACTCAATGCAAAAATCAATATC
30  CACTTTCTCCGTCGCGGCATATTGCGTCAAACCGCTTGACGGTTCAGGCAAGCGGACGG
   GATAGTGCCATCTACATATCACAGACGGAACTGTTGGACAACCTGGTGTTCGCTTAA
   ACTTTCAGACGGCATTCACACAAAATGCCGCTGAAAAACAACCGCAAGATTAAGGAAA
   CAAAATGGCCATTCTGAACTTGACGAACACCTCATATTTCTCCGCACTGACCAAGC
   CGATGGCGGAACAAATCGCGCAACTGGGCACTCAAAACCGTCATCTGCAACCGCCCGCGCG
35  CGAAGAAGAAATCGCAACCGCACTTCGCCCAATCAACACAGTGGCTGGAAACAGAGCGGT
   TACTGATTCCATCACCAACCGTTACCGCAACGCGACATCAAAAACACGATGTGAAAC
   CTTCCGCGCAACTCATCGGACAAAGCGAATATCCCGCTCTGCTATTGCGGACCGGTAC
   GCGCTGCTCCTCTCTGTGGGCTTCCGCGGGCGGCGAGAAGGTATGCGGTTGACGAAAT
   CATCCGCGCGGCCAAGCGGCGAGGCGTAAATTTGGAACAACTCAGAGAGCGGCTGGACAA
40  CGCCCGCGCTGATTACAAGCCGAACGTTTAAACACCACTTCAAGCGGCATTCCACCG
   CAACTTGAAAAAGAGGACGGCAAACTTACTGCGCTCTCTGCTCTCTCCGTTTACAC
   GTGGAGACCTTTGCAAAAAATAGTCTGTTAACGAATTTGACGCAATAAAATTCGCCCAA
   AAAATTTCAATTGCCTAAAACTTCTAATATTGAGCAAAAGTAGGAAAAATCAGAAA
   GTTTTGCACTTTGAAATGAGATTGACATAAAATTTAGTAACCTATGTTATTCGCAAG
45  GTCTAGTGGGTATAGCGGATTAACAAAAACAGTACGGCGTTCCTCGCTTAACTCAA
   AGACAAAGACTCTCTAAGTGCTGAAGCACCAAGTGAATCGGTTCCGTAATTTGTGAT
   CTCTACCGCTTCGTTGCCTTGTCTGATTTTGTTAATCCACTATAAAAAATAGAAATGC
   ACATTTTCATTATTCTCGCGCAGGCGAGGACTCCAGACTTACCATTCAGTAATGTTTGA
   AAATAAAAAGAAAAATCAGATGTTGTTATCCCGCTGCGCAGAAATGGAGACGGTGTCT
50  GTGCTCTCATTTTGTGTTTAACTCACTATATATAGCTGATTAAACATAAGAAATGCGCTC
   TGAAAGACITTTACAGCGGCATTGTTCAAGCGTCACTTATTTGCGCCTTGGTTTCGGT
   TACAAAACCGATTTTGGTGATTCCTGCTGACGGGCGCTTCTAAAGCTTTGTTTACATA
   ATCTGATTCCACCGCTTGTCTGCGCAATCGCCACAATCAGTTTTCATCTGCTGCTT
   GCGCGCTTCAGACGGCTTTCACCTTCCCGGATTTCACCTTGTCTGACGAATCCCGGC

```

GACATAAATAGCCGCGTTTCGCATCAATCGTCAGGCGCAGGGGGTCTTTAGGCTGTTTGTC
 CTGCTTGGTTTGTCTGCTCGAGCGGTCGSCAGTTTCCAAAGGATGGAATCGCTCAGCAC
 CGGCATAGTAATCATAAACACAATCAGCAACACCAGCATCAGCTCCACCAACGGCGTAAC
 GTTGATGTCGGACATCGGAGAAATCGTCGCCGAATTCATCGAACCAATGCCATAATCAG
 5 CTATCCTTTTGAATTAAGCAGCGGACGTGCARAATCGTGGCCATCGCATCCAAATCCTGG
 GTCAGTATTTTGTGCCGCGATTGAGGAAGTTGTATGCCAACCCGCCGAATCGCCACG
 AACCAACCCCGCGCGCTCGCCACCAAGTGCTCGCCAAATCGGCGCGCAACCGCGCAATA
 CTCATCTGCCCGCTTTGCCCGATATTGATCAGGGCGTGTAAATCCCCAAACCGTGGCCG
 AACAGCCCGCATAAACCGCGCGCTCGCCGCGATTGGAGGCAAGCGCGGTCAATCCGTAATCA
 10 AACCGCGCATATAATCTGCCGCATCTGTTGCGGATTGTAATGACCAATACTCGTTCAAC
 GGCARAAGCTCGCCAGTTTCGGACGCTTCGTTTCGGCGTAGTTGCGGTAAGACTGCAAT
 GCGCTTTCGCCCAAGTTTGGACAAGCGCATCGACGCGCGCATCTTTTCGACCGCGTCG
 TTCAGCGACAAGATCGCGCATATGCCGTTTTCGCGCGGCATTCCCTTTGCGCGCGCGA
 TACAGCTTGATGCAGCGCAAGACAACCAACACCAGCTTACGATACATCATCAACAGCATC
 15 APCAACAACACCAATCAGGACGGGATCGCCGATTCAAACACTAATTTCAAATTCATA
 ATGATTCCAACACTGAAAAAACCAATCAACATCCAAGCTGCCGCAACCCGCTCGCGCA
 CGCGCTAATTCAAATCAAATCTGACGGGGACTTTAAACTCCGTCCAGGCATTGGCTTGA
 AATGCCCGTTTTGCGCGCGCTTCGCTGCCGATTTGTCCAACGGGAAAAACCACTGCTTC
 TCACGATTTTAAACGGACTCAACATGACCGCCCGGAGAAACAAACGCTCAAAACAAACCG
 20 TACCCTGCTCGTCATTCTCCATAGAAAGCGTGGGATAAGCCGGGCGCGGAATGCTGCGGT
 TGGCGCTAAAGGATTGCTTTGCTGCTGCCGCGCTCCTTCCCGGTGTTGCGCTTTGACAC
 CGCCGCTAACCTTTACCGCTGCTCTCTCCGCGCGCGCTTCCGTCTCCTTTGGTACGCTG
 CCTATCTCTCCCATTTGCCCTGCTGCTGCTGCTTTGGCAGAAGCATTCGCCGGATGTT
 CGCGAGGTTTTTCAGACGGCTCTCGACCGGTTTTTCGCCCGGTTTGGGACAGGCTTCG
 25 CTTCCGGCTTAGGCTCTGGTTTTCGGTTTTCTTCGGGTTTCGGCTTTTCTCAGGTTTCG
 GCTCTTCTTAGGCTGCTGAATACTCGCATCCGCTTTTTCGTAACCAACCGGCTTCAAAG
 CCGGCTTGGGCGGCTCGACAGGTTTGGGCGGCTCGGCAACGGGTTGCGGTTTCGGGCGAG
 CAGGCGCGCTTGACCTTCGGGGGCGCGCTCCCTCCGCCAAATCGCCCAATCGCACAA
 ATTCAATAACATTGCTGACTCTATCACGGGACGTTGTGCGCTGCCAGAGCAATGCCA
 30 CCATTGCCAAATGCAGCAGTGCAGCGGAAACAGACTGCGGGGGTTAAATTCGTTCTT
 TATCCATAATTGCGGCATATAATAGCAGG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 279>:

gnm_279

35 ACGACAAGGTACGCGCAATCTGTTGGCGGCAAGTATGCCATCGATATGTTCAAAGTCC
 TGTCCCGCAAGCGGTGAAGATTTCACCTCTATACGTTTAAACGAGCGAGCTGACTT
 AGCCGATTTCGCATATTTAGGCGTGGCGCTTAAAGCCGATATCAACAGTTTCAGACGG
 CATCTAAGGTGTCTAAAAAGCAAAACACCGCCCATCCGAGCCATTCTGATTTACAATAC
 CGGCGGATTTCGATTGAACCGGTCTTACAATACTCAACTGGAGAGTTCAACATGACAAAC
 40 ATTACATTTCTCAGGCTTCCGCGGTGCTGGCGGCTTCGCGCAATTGAATTCGACCAAGA
 AAAATACTGGCGCAAGAAATCAGCGAGCAAGAAATGCTGGCTGTGCTAAAGACTTCGCG
 CAGAAAAAACTGGAACACCAAGGTGCTGCCAACGCGAATTCGTTGCCGTAGGCGAATT
 CACTTTCTACGACCACATCTCGAAGTGCAGTGCACCGCGCGGATTCGCCGCGGCTT
 CGGCTTCGACGCGCAAAACCTGCTTTTGGAAACAACTTCCGCACTGGCGCGGTAACAA
 45 AGACCAATTTCGCTATCGAAATGACCAATGTTTCGACCAACACTACCACTACTTGGTGCC
 TGAATTCACGCGGATACCGAATTCAAAGCAATGCGCAACACTATGTTCAACAACTGCA
 AGAAGCCCAAGCCCTCGGTCGAAAGCAACACCGGCTTGAAGTCGTTGAGTTCGTTCTT
 GTGGGTGGGTAAAGAAAAAGGCGCGCTGCAATTGCAACCGCTCGAGCTTGTGCTTAACT
 GTTGCTGTTTACGTTGAATCCTGACTGCTTTGGTTGAAGCGGTCGCGAGTGGATTCA
 50 AATCGACGAGCTGCTTTGGCTGTCGATTGCTTAAAGAAATGGGTGGAAGCCTACAAAGA
 CGTTTACGCTACTTTGAGCAAGTAAGTGCCAAAACTCTGTTGAGCACTTACTTGGCTTC
 GTTGGCGCAACACGCGCATTTGTTGAAGCCCTGCTGTTGACGGTCTGCACATCGACTT
 GGTACGCGCCCGAGCAACTGGACGCTTCGCGGACTACGACAAAGTCTGTCTGCGCG

CGTGATTGACGGCCGCAACATTGGCGCGCCAACTGAACAAAGTTTTGGAAACTGTGCGA
 GCCTCTGCAAGCCAACTGGGTGACCGTTTGGGATTTCAGCTCTTGCCTGCTGTGCA
 CACTCCATTGACTTGTGCTGGAAGAAAACTGAAAGCCAAACCCGACCTGTATCT
 TTGGTTGGCATTCACTCTGCAAAAAACCCAGAATTGCGCGTCTCTGAAGCTGATTGAA
 CGAAGCGCGTGATTCTGTTGCCGAAGAACTCGCGCCAGCCAAAGCTGCTGCCGACTCCGG
 5 TGCCACAGCAGCAGAAATCCATCGTCAGACGTTGCCAAACGCCTGGCCGATTGGCTCTG
 CAACCGACAGCAACGCAAACTTCCATTTGCCGACCGTATCAAAGCGCAACAACTGGT
 GAACCTACTCTGCTACTCGACTACCAACATCGGTTCTTTCCCGCAAACACCGAAATCCG
 CAGAGCAGCTCAGCCTTCAAAAAAGCGAACTGTCTGCGCGGATTACGAAGCCGCGAT
 10 GAAAAAGAAATCGCCTTGGTGGTTGAAGAGCAGAAAAACTGGACTTGGAGCTACTGGT
 ACACGGCGAAGCCGAGCGTAAACGACATGGTTGAATACTTCGCGGAATTGTTGAGCGGTT
 TGCATTCACTCAATACGGCTGGGTACAAAGCTACGGCTCAGCGTCCGTGAAACCACCGAT
 TATCTTTGGCGACGTAAAGCGTCTCTGAAGCCATGACCGTGGCTTGGTCTACTTACGCA
 AAGCCTGACCAACACCGCGATGAAAGGTATGTTGACGCGCCTGTAACCATTTCTGCAATG
 15 CTCTTTTCGTCGCGCAACGACATTCCTGCTCTACCGTGTGCAAAACAAATCGCACTGGCTCT
 GAACGACGAAGTATTGGATCTGGAAAAAGCCGGCATCAAAGTCATCCAAATTGACGAACC
 TGCCATCCGCGAAGGCTTGGCGCTGAAACGCGCCGATTGGGATGCCCTACTGAACTGGGC
 GGGCGAATCCTTCGCGCTGTCTCTGCGGTTGCGAAGACAGACCCAAATCCACACTCA
 TATGTTTACTCCGAGTTCACAGATATCCTGCGCTGCGATTGCTGCAATGGATCGGACGAT
 20 GATCACCATCGAGACTTCACGTTCCGACATGGAACCTTGAACCGCTTCGCGCAATTCOA
 ATACCCGACGACATCGGCCCGGGGGTTTACGACATCCACAGCCCGCGGTACCGACAGA
 AGCCGAAGTGAGGACCTGTTGCCGAAAGCCATCGAGGTTGACCGGTTGAACGCTCTGG
 GGTAAACCGGACTGCGGCTGAAACACGCGGCTGGAAAGAAACTCTGGAACTACTCCA
 AGTAATGATGAACGTAAACCGAAACTGCGTGCCGAATTGGCGAAATAAGCCGAGACCG
 25 ATGAATAAATACCGCTGAAAGCCTTTCAGACGGTATTTGCTCGTATTTCGGCGCAAG
 GCGCGAATTGCCGGAATACTTTTTCATTGACGCTGTTTTTTCTAATTGCGGCTTTATAT
 GTGGGAACAGGCAAACTCGGAGTTGTGTTGATAGTTTAAATAATTTATATTTATTTGAA
 CTATAAAATTATACAAATCATTTTGCATGGGGTAGAATGCCACGCGATTACAAATTTATC
 TCAAAACATCTATTAAAGAGCTTAAATGGCTTTGCAAGATCGTACCGGTCAAAAGTA
 30 TCTTCCGTAGTATTCGACCCGCGTTCGCGACACTTGGAAAGATGTGCTACCGATGAT
 TTGTTCAAAGGCAAAAAGTAGTCGATTCTCCCTGCCGCGTCAATTTACCGGACTTGT
 TCTTCTCACACCTGCGCGTTACAACGAATTTGTTGCGCGGTTCAAAGAAACGCGGTT
 GACGCAATCTACTGCGTATCTGTAAACGATACGTTGTAATGAACGCTTGGGCTGCCGAA
 GAAGAAATCCGACAACTCTACATGATTCTGACGGCAACGCGCAATTTACCGAAGTATG
 35 GGTATGCTGGTCGGTAAAGAGACTTGGGCTTCGGTAAACGCTCTTGGCGTTACTCCATG
 CTGGTTAACGACGCGGTGTTGAAAAATGTTTCATCGAACCTGAAGAACCCGGGCACTCG
 TTCAAATATCCGATGCAGATACTATGCTGCAATTCGTTGCTCCGATTGGAAGGCTCAA
 GAGCTCTGGCAATTTTCACTAAACAGGTTGCCAATTCGCGCTAAAGCCAAACAAAGCT
 40 TTGCAAGCAAAAGGTTTGTCTTACGAAGAAATCGTATTGGGCAAGATGCAACCGTACT
 TCCGTTGCGGCGATTACCGGCAAGATGACTGCCCTCAAGTCTTCATCGCGGTTAAATAC
 ATCGCGGCGAGCGAAGATTGGAAGCTTACTTGSCTAAAAACTGATAGCTGTTTGTCTAA
 GCGGCTTTAAATAACTGTCTGATATACCGGATAGAGTTATTTCGCGCGTCTCACTAC
 CGCTCCGAAATACCTATATTTATAAGAGAATTTGGATATTTGTTGCACTCAATCGAAAT
 45 TTGTTTTTATTTATCTGAATGATGTTTTGATTGGGAAAAATTTAAATGCGGCTGTGAAA
 CCGATATGTTCTGTGTCGGCAATGTTTCAGAGAAACGGAAGCAAAAGATTATGAAAA
 AAATTCAGCGGATGTCGCTGTAATCGCGCGCGTACTGCCGATGGGTGCGTTTCGCA
 ATGCGCGTTTACATTGCGATATGTTTACCTGATTGAAACAAATGTGTTGCGGACGAGCT
 CGCGCGCGTGGCTGTATGCCCTCCAAACTCTTGATTGCCGCGCAGAGGCGGCTCATC
 50 ACGCATTGCAATACGACCGCGTTCGCGGTGCATTGGACAAGACAGCATCGCTGCTCAAG
 GTGGAAGAGGTCATGACGCGGTTAAATCCGAGCGTGACCGTTTTGTCGGCTTTGTCGTGG
 CCGATGTTGGAAGAGTGGCTGCCGACAAGCGATTATGGGTTCCGCTAAATTTGATGACG
 AGCATACCGTCCAAATCGACGAGCATACTCAAAATACGGCAAAAAGTTTCTCGATTGCTA
 CCGGTTCCGCTCCGCTCATCTGCGCAATGGGACGCTTTGGGCAATCGTTGATTATCA
 55 ACGATGACGTTTTCTCATGGGATACGTCGCTAAGCGCGTTGCGGTGTTCCGGCGGGTG
 TTATCGGTTTGGAACTGGGTGAGGATGCAACGCTTTGGGCGTGAAGGTTGAAATTTTCG
 GTTGGGCGGAATCATCGCGGCAATTCGCGACCGTGTTCAGACGAGGCGAACCGCG
 TGTTTCGGCGAAGAAATGAACATGCATCTGGAATGCTAAAACCGAGGTCAAACCTCGATGCA

ACGGCAATGTAGAACTCCATTGGGAGCAGGATGGCGAAAAAGCGGTATTGTGTGCCGAAT
 ATATGCTGGCAGCCGTGGGCGGCCGTCGCAACGTTGACAAATATCGCTTTGGAAAATATCA
 ATATCGAAAAAGATGCGCGGGCGTACTGTTGCCGACCCGCTGACCATGCAGACCAAGTA
 TTTCCGCATATCTTCATCGCAGGCGATGCGTCCAACCAACTGCCTCTCTGTCGATGAAGCTG
 5 CCGACCAAGGCAAGATTGCGCGCGATACGCGGGCCGCTACCCGAATATCGCGCGGGGTT
 TGGCGGGCAGCACCATCGCGCTGCTGTTTACCAGTCCGCAAAATCGGCTTTGTGCGGTCTGA
 AATACGCGCAGGTTGCCGCCAATACCAAGCCGACGAATTTGTCTATCGCGAAGTATCGT
 TCCAAAACCAAGGCCGACGCCGCGTATGCTGTTGAACAAAGGCCATATGCCGCTGTATG
 CGAAAAAGCCACCGGCCGCTTTATCGGCGGGAAATCTAGGCCCTCGCCGCGAACATT
 10 TGGCGCACCTGTTGGCTTGGGCACATCAATGAAGATGACCGTTCCGCAATGCTGGATA
 TGCCGTTCTACCATCCGTTATCGAGGAAGGCTGCGTACCGGCTTGGCGGATGCGCATG
 CGAAATTTGAAAGCCTGACCGATATGGCAAAACATGCGCTCTGAAATTTTTCAGACGAT
 ATTTTGTGTTTGGGGATGGGGTCCGATGCTGATACCGGTGCGGGAAGGGGGCGGCAAAAC
 TAAAAATCTTTCTATTAACTGCTGTTTCCACGCGTGTGTTGTCAAAACTCTATCAGTTTG
 15 TTTTAAAAATACACTGTTCAAAATGGGATAAAACAGGTAAATTAACSTTTATGTAACCCA
 GTGTAGCAATGGGTTTACGGTTTGTAGTCGATATATAACTACAGAGGAATTGACTATGT
 CTGCCAAACCGGCTCTGTTTATCTGGGATTGCCGG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 280>:

20 gnm_280

GCATACAGCGCTTAACCTTAATTTGCAAAATGACCGTGCTAAACATGCCGTCTGAAAG
 TGGAGATTGGTTTTCAGACGGCATCGCCGAGAGATGTCGGAAATGSACTTTATCCCAT
 TCCTTTTCGTTGAAACCCGCTCTGTTATGGCGATAGAACTCAATCGGAGGGTAGTCTCG
 25 TTTGGGCAACAGCAGTCCGCTGCTGATGTGCCGTCCCCTGTTGAAACATATAAGGCTC
 GGAGAAAGTATAGTGGATTAAATTTAAACAGTACGGGCTTGCCCTGCCTTGGCGTACTA
 TTTGTACTGTCTGCGGCTTCGTGCCTTGTCTGATTAAATTTAATCCCATATATATAA
 GGGCATCATCTCTGCACCGGCAAGAAATCCGAACCCGAACGTTTGAATAACATCCGARTC
 TCCGAATTCGCGCTGTGTGGGAATGACGAAAAAACAGCATTCATTTGCCCCGAAGCAG
 TTAATCAACCTTTCCGCCACACACCTATTCCAATATCCAATGAAACCATCACAGAAAC
 30 CCTAATCTCGCCCGCAAGGCCAAAACTTCTGACCGCGGATTTGGCCGCGCCGCCCAA
 TGTGAAAACTTCTGATTACACGCGCAACGGCGCGTGAGCAGAGTSGCTATCAGAGTT
 GAACTCGGTACGCACTGCGCGACATCCGGAAGCCGTGCGCCGAACCGCGAAATCGT
 GCACACGAGGTGCGACTGCCGTTGCCCTACCTCAATCAATCCACAGCACCGTCTGCTGT
 CAATGCTGCCGAAGCGTTGGGAGGCACACCGGATGCGGACGTTCCGTAGACGACAGCGG
 35 CAGGTTGCTGTGCCGTGATGACCGCAGACTGCTGCCCGTTCTATTGTCGACAGGGC
 GGGTACGGCGGTTGCCGCCGACACGCGGCTGGCGGGTTGGCGGGCGGCGCTACTGCA
 AAACACCATAGCCGAATGAAGGTTCCGCCCTCGAAATGATGGCTATCTCGGCCCGCC
 CATCAGTGGGATGCGTTTGAAGTCGACAGGATGTTGATGCGTTCTGCACGCCCAT
 GCCCGAAGCCGCCACCGCATTTGAAGGCATAGGCAGCGGCAAACTTCTTGGCACCTTTA
 40 CCGCTCGCCGCGCTGATTCTGAAGCGCAAGGCGTGGCGGGGTATATGGCGGACAGCA
 TTGACGGTTTGAAGCGGATATCTTCTTTCATCCGCGCGGACGAGCGACAGGCGG
 TATGGGAGCGCTGATTGGCTGGACGGCAATGCCGCTGAACACGCGCGCTGATATACT
 ACCGACTTTGTGTTTGAAGAAAGCAAGCCATGAACAACTGTTTCTTACTGCCGAGT
 GCTGATGCTGGGCGCGTGGGTTTCCACCTGAAAGGTGACAGCGGCATTTCTGCCGCGT
 45 GACCTACCGGAGCTGGCAGATCGAAGCGGACGAGCATTCGCGTTCTTTGGAAACCGC
 GCTGATACGGCTTCGGGACGGGTGGACGATGCTGCCGGCGGCGAGATGACCCCTCGGTAT
 AGACAGCGCTTCCCAAAACAGGAAACCTACACCCGTTACCCGTGCGGCGAGTCATCAACGA
 ATATCTTTGATATTGACGGTTGAAGCGCAGGTATTGAACCGCGGCGAGCCGCTCGGTAA
 ACCGATGACCGGTGTCGCTCCGCGCGCTCTTGTCTATGCGGACAAACGAGATCTTGGGCAA
 50 ACAGGAAGAGGAAGCGGCATTGTGGGCGGAAATGCGGCGAGGATGCCGCGAACACGATTGT
 CCGCGCCTGACCTTTCTGAAGGCGGAATGACGTGGCGGCACATATCGGACGCAATTGATA
 CGGACCGCGCTTTGAAACCCCTGTACGTCATCCAGGCGAGGAGAACTGTGCGTATCG
 AGGCATTGGACGCAATTGAGGCGCGCGCGAAGAACAGGTTACCTTAATCGGGAAGTTT

ATACGCCAGACAATGCCTTCGATTGGAAACGAGCTGCTGCAAACCGCAGGCAGTGC GGSGTC
 TGTTTGCCGATTTGAAGCTGTGGAACTGCATATCCCTAACGGCAAGCCCGGCAAAACCG
 CGCGCGAGGCGTTGCAGGATTTTGCCGCCGATTTGCCGAAGATACGGTAACGCTGGT TT
 TGTCTGCCCAAACCTGGAGAAACCCAGCTCCAGTCCAAATGGTTTGCCCGATTGGCGCGAA
 AGGGGGAAGTGTGGGAAGCCAAACCGGTGCGCGCGCGCGCTTTGCCCAATGGATACCGTG
 5 GACGCTGGACAAAATCGTTTGGGTATCGAGGCAGACGATTGGCACTGTTTGTCTGAGC
 GCGTGAAGGCAATCTGTGGCGCGCGCTCAGGAAATCGACAAGCTCGGCTGCTGTATC
 CGAAAGGGCATACCGTCAATATCGATGAGGCGCAAAACCGCGTTGCCAACGTCGCCCGCT
 TCGACGCGTTCCAACCTGGCAGGCGGTGGATGAAGGGCGATGTCCTGCGCTATGCAAGC
 10 TTTTGGACGATTGCGGGAAGAGGGCGAAGAACCGGTGCTGTTGCTCGGGCGGTGCGG
 AAGACGTCGSAAGCTGATCCGCTTGCTGCGCCCTGAAGCAGGGCGAGAGCATCCAAT
 CAGCGCGCAACAGCCTCAGGCTTTGGGGCGACAAGCAGACGCTCGCACCGCTTGGCGTCA
 AGCGGATTTCCGTGCTCCGCTGCTTGACGCGCTCAAAACCTGCGCCCAATCGACCGAA
 TCATCAAAAGGTGCGGAAGACGGCAGCATGTGACGGTATTCAAACGGCTTGCTGTGTCG
 15 TGGCGGAATAAAGCGGTAAATCCCAAAATCCGAAATACTGTAAATAACCGTTAATCCTG
 AAAAGTATTCACCAATCCGTCGGAACAAATTTGACAGCGCACGACCACTCAATAAAGGA
 ACATTAACCCATATGACAATAAGACCAAACTGCGCTTGGCGCGCTGATTTTGCTATCAGCA
 CGCGCTTTTAAGCCTCATTATCGTATTGATTGTCGATTCTTGCGCGCTTGCCATCGCTAC
 TTTGACGCGTCATTGTCGCTCGCGCTGCGGCGGCTTTGTTTGGACATCCGCGCGACAGC
 20 AACGCGCTTTATCGAAACGCTGAAAAAATTCGACATCGATCCGAAATAAGCGAGATCA
 ACGAGCCAAACCTGCGCGCTATGTACACAGCGCGGACAAACACGAAAGATGCGATTA
 CCTGTATCTGCTGTGCGAAAAATGTTCCGTTGACGAGGCGCAGCGTATGTTCAAAAAAC
 CGCGGACAGCTCAGGAAATCAATCAAAATGGCGGCAAAACAGTCGCGCGTCAGAAACGTC
 CGCACCGCTTAACCGCGCAGGACATCTTTGCATAAATGCCGCTCTGAAGCGTGTGGCGTT
 25 TCAGACGGCATATTCTGATTGAAAGATGATGACATGAAACCGCCCGCTCAAAACGCC
 GCTTTGCGGCCATGCTGTACGAAATGCTGCTGTCGTCGCGGCAACCTGTTTGGCAGCAT
 TGAATGCGCGTATGTCGCGCAATTTTCTGAATCCGCTTTCTATCGCGTTTTCGATTTGG
 TAACAATATCTGATAATGGGAGCATGTTGGCTTTATTTCCGCGCAACTGGCATGTGTC
 AGGGCGAGACCTTTGGCGATGAGGACATGGAAATCGGCTTTGTGCGACCTTAACGGCATAC
 30 AGCCGCTTTTGCACTGCTCGGCTCGGCTTTATTTGGCGGTGCATATTTATCGTATTTA
 TCCCTATGTTAGCCTATGCGGATTACGCCACTTCTCGGCATTTCGCGCAAGGCGCGG
 CCGCGCGGCATGATTGGCTGATTTTACCGTGGGGGTTCGCACTGCTGAATCCCGATC
 GGCAGTTCTGTATGATTTTCTTGAGGAACAGATTGTTGGCGCGTCAAGAGAAAGCCTT
 AAGCCTTTATACCGCAAGGTTTCAACCTGAAAAAATGCGCTCTGAAAGGCTTTGACAG
 35 GGAATTTGCTTATCGGGGAAACCGATTATTTCGATATTTCGCACTTGTTCGCCGATCTGCT
 CGATTAAAGCTTTCACTTCGACCGAGGCTTGGGTGCAATTCGCGCGCAATGGATTTCGTG
 CCAAAGTGTGGCTTCGCGGTTTAATTCCTGCATCAGGAAGTCCAGCCGTTTGGCGCTGC
 TGCCCTTTGTGTTTCGTTAAGCATACGGCGCACTTCGGCAATGTGGGTGCGTACCGCTGAA
 CTCTCTCGTGCATGTCGATTTTGGATAAAGAGGGCAATTCCTGTTCGACGCGGCTCGTT
 40 GTGCAGTCTGCCGACCGCTTCGACGAGGCGGCGCGGATTTTTCTTTATGTTTCCAA
 CAGGATAGGAAGAGTTTCGCTTAATGCATCTATGATTTCTTCCATAGCCTCAAGCGGTTG
 CAGCAGTGCCTCGCTTAATTTTACCTTCCCGCTTGCGTGCAGTAAAGTCTTTTAA
 CGCTTTTTCGTCAGTTTCGGTAATGCTTTTTCGCAATCTTCGCTATTTCCCTTTGGCT
 TGCCAAATACGCGGGGAAACGCGAGATGTGCGCAACGCCAGTTTTCGCAATCTGATGAT
 45 CTTGCGGAGGCTTTGTTGATTTCGGCAAGCTTCGACCAAGTTCGCGATTCACTTTCCAA
 GGACTGACTGCCGTTTTCCGCACTCTGAAATTTGGATTTTGCACTTCGACTTTGCCCGCTGC
 GATATGGGATGAATTTTTCGCGGATACCGCTTTCCAAATAGCGCAAACTGTCGCGGAT
 CCTGATTTGAATATCTAGAAAACGGTGGTTGACCGCACGCAAGTCGAGATTGATGCGGTT
 50 GCTCGCGCACTCTGCGCGCGCTTTGGCAAACTCGGTCATGCTGTGATGTGGATATTTCC
 GCTGCTCATGCTGCTTCTCGAAGCCGCTTAAATGGAATCAATATATACATCTGTATGTG
 CGGCAACGCTTTTCGGGTGTGAAAAATGAAGATTTGACGCGCGAGATTGGAATCAGCG
 GCTTTTGTGCTCAAGGAAGGAAATGTATAGTGGATTACCAAAACAGTACGGCGTT
 GCCCTGCCCTTAGCTCAAAGAGAAGCATTTCTCAGGTGCTGAAGCACCAAGTGAATCGCT
 55 TCCGTACGATTTGACTGCTGCGGCTTCGCGGCTTGTCTGATTTTGTATTAACCAT
 ATATCAATTCCGCAATCTGTCGGAAGACAGCTGATGCGCGAGTGCTGCTGTCATGTCT
 GCTTTTATTTTCGCAATTCGAACGGCTGGACGGATAAAATCGTGTACAGCACGACGC
 ACAACCGCATTGATGTTTACCAATAAAATACCCGACAAACAAATTTGTCGGGTATTTT

ATTCGCTATATTTCAAAACCGCTTCGGCTTCTTCGCTCAGGAAACACGCGAGTTTCTGCAT
 GGCCTTTTGGCTTCGATTTGGCGGATGCGTTCCGGCAGATACGCCGTATTTCGGCGGCAAGCTG
 GTGCAGCGTCAAGCCGCGCTCGTCTTGAAGCCAGCGGCTTTCACAATACGGCGGCTCTGT
 GTCATCCAGTTGCGCCAAAGCGTTTGTAAACCTTCTGTTTGCAGGCGCTAATCGCGCTGT
 5 TTTGCATGAGTTGTCGCTCGGTTCCGGAATCTGTGTCGGCAAGCCAGTCGATCGGCGGCGAA
 ACTATCCTCTGCTGCTGCTGTTGTCTGCCATGATGGCGATGTCGTGTCGCCCTCATTTCGCTG
 TTCATTTCCAGAACTTCGGAAGTTTGACACCCAAATCTGCGCGATGTCTTGTGCTCCTC
 TTTGGGAGACAGGCGGTTGAGGTTTTTACGCACTGTCGCCAGGTTGAAAAACAGCTTGGG
 TTTGCGGTTTGGTGGTGGCAACGCAACCAACGCCAGTTTCTCAAAATAAATCTGCTGAT
 10 TTCGCTTTAATCCAGTGTACGCCAAATGAAAACAGACGCCGCTCTACCGGCTCGTA
 GCGTTTGACCGCTTCATCAGTCCGATATTGCTTCTCTGAATCAGGCTCTGCCCTGATTACG
 CCCGTAGGCCGTATAGCCGCGCGCGATGGAACGACGACGCGCAGGTTGGGACAGGATGAG
 TTGTTTGGCGGCTTGAGGTCGCCTTTGTGTTGGCGTTCCGCAAGCGGTGTTCTTCCTCT
 TTGGGTGAGCATGGGAATTCGTGTGACGCGTGTGATGATTGTTTCAGGCTCCGCTTGGC
 15 ACTTTGGATGGCGGTAATGCGAAGCGTTATTCAATTTGGGACATTCCTTTCCGGTGA
 GCTGCGTATCGCGGTTTGTCTGTTGGGATGCAATATATCACTGCTGGCTGTATTTT
 GTATATTTGCGAGGATATCGCCTAAGGTTTGAAGACAGGAAAAATTTGTAAAGCAA
 GTTGATTGATTTTGTAAACCTGATGCTCAATTGCTATTGGAATTATATATGATCACTGT
 GGTGTATGTAAATAGCCGTTTGTAAAAAGACAGCCGCTCCGACCGGCTGTGACGGTA
 20 TCAAGTCTTCTTTGTTCCGAAGATGAAACGAATCAGTGGCGCTAGGCGCAATATGCCAT
 CAACCAACATGAATGCCGCTTTTCATATAGGGCGTTTCGCCGACATAGCCTTTGATGTG
 TCCCTCCAAACAGGTTTCCGTATCGGTTGGGCTTTGGCGGATGATGTTGCCCTTTGGGGA
 GATGATGGCGGTTGCGCGGTTGTTGGTGGCGGACATATAGCGTCCGATGTCATAGC
 CCGCGCTTGCATTTGTTGAGGTTGCTGTTACATGGCTTGGATTTCCTGACCAAGCCTAT
 25 ATTGCTGTCATTTGGCAAGCAGGTTGGCATCTTTTGGCGGCAATCAGTTCTGCGCCGAA
 TCCGCTTTCTGTAACAGATGTTGAAGCGGATTTTGGTTTTTCATCAGCAGGCGGATG
 CTGCGCGCGCTTTTCCGGAAGTCGGAAGGGGACATATCCATCATTTTGAAGCGGCTG
 GGTACGAAAGGCGAGCGGTTTGTATTCGCCGAAGGGACGAGGTGTTTTCGGCTAGTA
 GGGGATACCGTCTCTGATTGTTTCTGTATACCGGTCAGGTTGATGACGGCTTTTCGTA
 30 ACCGTTGCCCTCCGAAGTGTATTGGCTGATGCCGACGGGACGCGCTGCGTTGTTTTC
 CGCTGTTCCGCAAAATTCGCCAGTATGTTTCCGCGAGTTTTGGCGCAATACCGGAT
 GCGGTTTCCGGCAGGATGACGATGTCGCGCGTGGTTTTCGCCACTTGTTCGTAAATATT
 CTGATATGGTCGGGAATACTTGTGCTTCACGCCATTGAGGGTTTGGTCGATGTTGCCCTT
 35 AAGCAGGCGCAGGTTGCTGCGGTCGCGTCCGGGCGGTTGAAGTCGTTTATTCGGGCGGT
 GTAGCTTCGCGCAAGCAGGCGGCAATCAGGATATTCGGAAGCAGCGGTTTGCCTGCAAG
 TCGCGGTATTACTCGCCAAACACGCGCAGACCCGAGAAAGCGGTTTGGCATGTATAC
 CATGTGGATGCCGCCAATGGGCGAAAGCGGCGAGCGGCTGTCCGGGCTGATTTGGGA
 40 AGTCGCGATTGCGCCCGAGCGAATCCGCTCAGGAACGTTCCGCGGCAACTCGCTCAG
 CGTCCACAGGATGGGCGAGTACCAACCGATTTTATGCCCCGAGGCGAGGTAATTTT
 CCACAGCCAGAAACACAGTCCGCGATAAAGGCGAAGTAGGCGGGAGTAGGAAGTCAG
 45 CGGTACGGCATAGAGTTCGGCGAGGCCGGAACGTCGTGACGGCGGCTGTATCCAGTA
 GAACGTGTCTGTATGCGGTGAGGCCGAAACAGGTAGGCGGAAGAGACGCAAAACGCGG
 ACGCAAGTTCGATGAGGCGGACGAAGGCCACCGAAATCAAGGGCATCAGCCAAAGTGGTA
 GTAGGGTGCAGAGTAAAGGGGTTGGCGGCGCAAAAGGATGAGCAAGGCGAGTAGAG
 50 GCGCGGCTGCTGCCAGTATTGTCCAGTTTGGAAACCATTTCACTCTGTCTGTTCGGAAG
 ATACCGTCTGAACATCTTTCAAACGCGCATCGGTATTGAAAAGGAATCAATGCCTGCGG
 AAACGATTATCAGCGCGCAAGCGCGGCGCAGGCAATCAGACCGGAAGCAGCGCGACA
 ACGAGGTTGGCGAAGTACTCGCGCAGCGCAGCGTCCAGTGTTCGCGCTGCAGGAATCG
 TGCAGAAGGCCGAGGTTGTGGCGGACAGTACGCGCGCGATAAGAAACATGGCAAGCGGT
 55 CCGACCAAGCTCAAAACGCGCATAAAGCAAGGCATAAAGGCAGTCAGGATTGCCGCCMA
 CTGGCGGCAAAAGGTTTGTGGCGCGCATCAGCAGTATGCTAAGTCGTGAGTTGTAGC
 ATGACGCGAACGATTCCGTACACCAAAACAGTCATGCGGATGCCGATTGCCGCCATTACG
 AGCATGCGGCTCATGTGCGGTGCAGAACTGTGCAGCAGTTTCTTACGCCCTCAAAGCA
 CAGATAAATGCCGCTCGCTCAAAAGCGGCTAATGAGTTTGGCGCAGGAAGGCGGAAG
 CAGCAGGCGCGCAGGCACCAAAACCGGCTTGTGAAAAGAAACCTTTCGCCCTGAGCCA
 AACATTCGCAACTCGCTTTCGCCGATACGCCGCTAACCCGTTGGCATTTGGTGGCGCA
 ATGCTCGCGCACACGCGCGGCTTTCTTTGCGGCGGCTTTGGTCATCAGGCGCAACATC

GTCCAAAACGGCGGTGATGTCGTCGGCGAGGGTAAATAGTAGGAGCAATGCCATTAAAGA
 ATCCTGAARTGCGGCGCAAAGTCCGACATTATATAGGAGAACGCGGATTGGGCGGGTTTC
 AGGCGGCGATGAAACAGGAAATGCCGCTCTGAACGCTGGCGGACGTGAAGTAAAGTTTC
 GTGAAAGAAAAATACCGTGTTACAGTCTTTCGATTAAATTTATGAATTTTAAAGGAGA
 5 ATCGTTAGCGTGGATTGGATGGCGAGTCTGTTCTGCCGGGTGGCGCACTGTTGTTCTTG
 AGCGTGGTTTCGACCACTTTGTCCGCACTGTTGGGAATGCCTTTGCTGCTGGTTTCTCCT
 GCCAACGCTGTTGGACAGGGCGCGGAAGCCTTGGCGATTGCGCGCTTCTGATGCTGGTC
 GCGCGTCCGTGGCGAGTGTTCGGCGGTTTGGGAATTAATTACAGCTTGGCGTGAAGAG
 CGGTATAGCCGAATAGAAATGCATCCGACACCGCTGCTCAGGCGGGGATTTGCGGTGGT
 10 ACATCCTGCCGACGCGCAAGTGCATATAGTGAATTAACAAAAATCAGGACAAAGCGCGG
 AGCCGACGACAGTACAATAGTACGGAACCGATTCACTTGGTGCTTCAGCACCTTAGAGA
 ATCGTTCTCTTTGAGCTAAGGCGAGGCAACGCCGTACTGGTTAAATTTAGTTCACTATA
 AAAATGGCGAAATACTTTACCGAGACGGGTATTAGCGTCCGTGAGCATTTTGATTCTCTCG
 GTGAGTTTGTGCTTTCGCCGGCAGCACGTTCCGGTGATTGGCACTTACTACGCTTGA
 15 GGCTGGAAGCGGGCGAAGAGGGTTGAGCCTTGGCGAGCTTTTCGATAAGCGTTCCGATA
 GTCAGGAGCCGGTTCAGGGCGCGCGTATTGACATCGGCGCTTTATGCTGACCGCAAAAG
 AGGTTGACGCTGGCGGCAATATCCGGTCTATGGGGCTGAAAGTGCTGCGTTAGAAAGGTT
 TGATTTGAATGCCGCTGAAGCCGAGTTGCCGGTTTCAGACGGCATTTTGCTGTTTAGT
 TTTTGTGCTTTTGCCTGTTTACGCTTTTTCGGTAACGCTTCCGCGCGCTGTGCAA
 20 AGGCGTTTCATGATATAAGTGGCAGCGGCGCAATGCCCATCGCTGCGCGGTGCGGAT
 GCATGAATCCGTTGTAGGTTTTCGCGTGTGACTTTGATTGTACCGTTGATGCGCTTGAACA
 TGCTGTGACGACGACCTGCGGTTTTCATGATGAAGTCGAGCGGTAGAGCGGCGGAA
 ACATGGTTCCGCGGCTTCCGCTTTTCCGTTGGCAGGCGACGAGTTGGATTGATTCATACA
 CTTTTTGCCCTTTTGTGATGATGCTGTTGTGCGGCGCAGAGCGCGCGCGCAGAACGACA
 25 CCAAGCAGAGGGCGGTCCGCGATCGGGTTGTGTTTATTGTTTCTTCATGTTGAAA
 CCTTGTGTTGATTTGCGTAGCGGGTGAAAGATTTTTTGGCGAATCAGTAGTATAGTG
 GATTAACAAAAATCAGGATAAGGCGACGAGCGCAGACAGTACAATAGTACGCGCAAG
 CGAGGCAACGCCGTACTGTTTAAATTTAATCCATATAAGGTTGCACTGATGTTGTTG
 TCCAGCATAGATGCCATCATACGCTAAAGTAGCGGGGAAATGCCGCTGAACACGCGCTT
 30 CAGACGCAATTTAGACATGGGTCAACAGTTTCAACGCCAGCTGCCAAGGTTTCTTCG
 GCAAGTCGACGAGTGATCTATCCAGTCCGGGTTGCTGTTGAGCGAGGGATGTAGCGG
 TAGCTTTTGGCGCTGCTTCATAAAATGTTCCCGGCCCATCAGGGCGGATTTCTTCCATG
 GTTTCAAAACAGTCTGCCAAAAAGCCCGGGCAAAATACGTCACGCTCGGTTACCCCTGT
 TTGGGCGATTTGCGAACAATCTCGTGCTCGGTTGAOCCATTTTGCCTCGCGAAT
 35 TGGCTTTGGAACGATACGACATATTGGTCTTCGCTCAGTTCCAGTGCTTCGGCAAGCAT
 TTGGCGGTGTGGCGGCACTCGTCGGGATAGGGGTGCGCGAGGTGCTGGTGCTTTCGCGG
 AGCGCGTGAAAACCTCAACATCASTTTTTTCCCGCGCCGCTGTTCCGCGCAATATCGGAGG
 ATGCGGTTTTTCATCGCATCAATGTAGCCGATATGCTCATAAAAGCGCAACCGGTGCGG
 40 ACGCTCATTTGGTTCCGTTGACGAGTAAATGTTGCGACACCTTATCTACTGCCGCTCGC
 CTGCTGGAAGCGGCATATTGCGGGTACATCGGATGACCAAGCTCTGCCAGCTTCCG
 GCGTTACGTTCCGCAATACGCTTGCCACCGAAGGATTGCCGTAGGTCTAGGCTGGCGT
 ACGATGAGGTGCGGCATACGTTTGGCAAGCGCGCAGCTTGGCGTGCTGTGTAACCTCT
 AAGGCGGAACCTTCTTAAACAGATTTTTTATAGGCGTGCGCGCTTTTTTGGGCGGG
 45 AGCGTCAGTACCAGACCATGACAGATGGGATACCACAGCCATTGGGCGAGTTCGACGAC
 CGCCGGTCCGTCAGAAAGGACTTCAGATAAGGTCGTACCGCTTGC CGCGTCCGCGCTCG
 GCGCTGCCGAGTTTCAACAGCAAAACGCGGTTACGTTTTGTTGCGTATAGGAAGGGAG
 GGTTCGGAAGAATGGAAGCATGTCGGTTTTCTGAAAAATAGTGCGGGTAGGTTAAAGC
 GGCAAAATGCCGCTGAAGCGGCTTCAGACGCAATGACAGGGAATCAGTCTGTGCGCGGT
 50 CGCGGTTTTCTGGAATCGCGCTGCCAGTCGGCAAAATTTGCTTGTTCGACGGCTTCG
 CGCATTTCCGCGCAATGACTTTGTAGAAATGACGATTGTGGATGGTGTCTCAACTGTCGC
 CCAAGATTTCGCGGTGCGGTGCAGATGGTCAGTAGGCGCGCTGAAGTTTGGGAC
 GCGTAGCAGGTGCAGCTTTCGTCTATCGGACGCTTGTGAGCTTGTGTTGGCGCTTTTTG
 ATTTTCAAATCGCGCAACCGGTAACAGCGCAGCGGTTGCGTGCAATTCGGGTTGGGCAT
 55 ACGCATCGAACATATCGATCGCGGTGTCGCCAGCTACACGAGTCTTCGCGCGTGCT
 ACGCCCATCAGTAATGCGGCTTGTGTTCCGCGCAGAAATCGGACGACGGCGCGCAGCATA
 CGGTACATTTCCGGCTTGGGTTCCGCGACGGACAACCGCCGACGCGCGCGCGGAAAA
 TCAACTGTTTCAAACCGCGCAGCGATTCTTCGCGCAATCTCATACATCGCGCTTGC

ACGATGCCGAACAGCGCGTTGCGGTTTTCAAATCTTCAAAGGCTTTTTGCTCCGTTCC
 CCCCAGCCAGGCTCATTTGCAGCGATTTTCGGGCTGTTGCGGCTCGCCCTCGCCCGGG
 GTGCATTGCTCCAACTGCATCGCGATATCCGAGTTCAAAACCGTTTGGATTTTATCGGAA
 ATTTCAAGCGGATAAAAAAGCTTTGTCGCGCTTAATCGGGCTTTTGAACGTACAGCCCTTCT
 5 TCCGTCAGCTTGCGCATATCCGACAAAGAAAAACCTGAAAACCGCCGAGTCGGTCGAGA
 ATCGGTTTGTCCAGCCGATAAAACCGTGCAGGCGCCGCAATTGCCCGATAACTTCCAAA
 CCGGACGCGAGCCACAAATGATAGTGTGCCCAAAATTAATTGTGCTTGATATCGTGC
 AGGTTTTCGGGGTTTCATCGCTTAACCGAACCGTAAGTACCGACAGGCATAAATACCGCG
 GTTTCAATTTGCGGTGGTTCACATCCAGCTGCGCGCTGCGCGAGACCGCTCTTTTGTG
 10 TGTAAGGTAATTTAAGCATAGATTGAATGTCAGTTGGCGACAGGGTTCGAAATATAT
 TTTAAAGACGGCATTATAAATGATTTCCACGGTTTTTCAGACGACATCCCG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 281>:

gnm_281

15 GTATTCTGGGACAGCCGTAGACTTACTTTATTATCCTAATGTTATTTTGCCTAAAGAAA
 AGATAGAAAAGACATCATTAACTCTATTTAGGACAATTTCTAGGCTCTGTTAGTCTGAT
 ATTGCTAAGTTTACTTTTGCATTTGTCTTAGATTATATTTCTAGTAAAGAGATTTTAGG
 TTGTCTCGGCTTGATTCCAATCTCCTAGGCATCAAGTTTGTCTTTAGGAGATTTCTGA
 TCGGAGAGGCTATTGCCAAAGAGGGTTTGCAGCAAGATAATAAAACCTGATTTTCTAGT
 20 CGCATAGTTACTTTTGCAGTTTGTGGTGTGCTGACATATTTGGTGTCTTTGTGCCATATT
 TACTACCTTAAATTTAGCGAATTTGATAGTGGCTTACTTACCTTCTAGTCATGATTATA
 TCTCTTGGTTTTTCTGCCAAAATTAGCACAAGTCCCTCTGTTGGAGAACCTTTGGA
 AAAATATAGCAGATGGTTTTGTCTGTGTTAATTTAGGATTTGGGGATATATATCCTGGT
 TGAATAACACAGTTTTGATATGCTATGGACTGTGTTGGGCTAGGAAAAAATATATGAAA
 25 AAGATAGTATCTGCAAAGACTGCCATGTGCAGTCTTTTGTGCGGGCTCTTTGTGTCT
 TGATGCCGTCTGAAGCAGTCTCTGCACGACCTTTGTGCGAATATTTGCTACACTTGGCAA
 TCCGTCATTTTTCTCACGCTTATGCTGACCTATACCCCGCCGATGCCGCGCCCGCG
 CCAAAACCCAGAAAAGCCGTGGCTGTCTGTTGATGGCGTTTGCTGGTTGTGGCCCG
 GCGTGTTTTCCACGATTTGTGGAATCCTGACGAACCTGCCGCTATACCGCGCTGCAAG
 30 CACTGGCAGGACGCCCCACCCCTTGGTTGCCATCTGTTGCGTCAAAACCGATTTCGGCA
 TACCGCGCGTGATCTTTGGGTTGCCCGCGGTTCAAAATTTGCTGTGCCGCTGGGCTG
 CCGCATCATACGATGCCGCACGCTTTCGACGGGTATTTTTGCGGTTATCGGACTGACTT
 TCTGCGGCTTTGCGGTTTCACTTTTTGGGACAGACCCAGGGCGCAGCTGCTGCTGA
 35 TCTCATCGGCTGTATCGGGCTGATTCCAGTTGCCATTTCTCAACCCCGCTGCCGCG
 CCTTTGCCGCGCCGGAGCTGGTGCTGCAGCGTTATTCTTTGGCTGCCGCGCGGATG
 CCGCTCTTTTCTGCTCGGTACGGGCTGGACGCTGATGCTGGCAGCAGCTTATCCGG
 CAGCATTTGCCCTGATGCTGCCCTTGCCCGTACTGATGTTTTTCCGTCCTGGCAAGCA
 GCGCTTTGATGTTGACGGCAGTCGCTCACTTGCCCTTGCCGCTATGACCGTTTATGACG
 40 TTTTCCGTTACGTTTGGCGGGCTGCGGCACGTTTACAGCGGCATTGATTTGTTTACTACT
 TGAAAACCTGCTTTGGTTTGCATTGCCGCGCTGCCGCTGGCGGTTTGGACGGTTGCC
 GCACCGCGCTGTTTTGACGCGACTGGGGGATTTGGGCGTCTGCTGATGCTTGGCGTTT
 TGGTGCTGCTTGGCGTCAATCCGACGCTTTTCAGGATAACCTGCTGCTGCTGCTTCCGC
 CGCTTGCCCTGTTGCGCGCGCGCAACTGGACAGCTTAGGCGCGCGCGCGCGCGCTTTG
 45 TCAACTGGTTTCGGCAATTATGGCGTTTCGAGCTGTTTGCAGTGTCTGTTGACAGGGCTTT
 TCGCCATGAATACGGCTGGCCCGCCAAAGCTTGCCGAACGCCCGCGCTATTTACAGCCCT
 ATTATGTTTCTGATATCGATCCCATTCGATGGCGGTTGCCGTACTGTTTACACACCTGTT
 GGCTGTGGCGGATTAACCGGAAAAACATACGCGCGCAGCGAGGCGGTTTACCACTTGGGCG
 CAGCGCTTACCCTGACCTGGGCTTTGCTGATGACGCTGTTCTGCGGTGGTGCAGCGCG
 50 CGAAAAGCCACGCGCGGCTGCTCGGAGTATGGAGCATCGCTTTCCCGGAATTTGAAC
 GGGAGCTTTTCAGCGGCATCGAGTGATCGGCATAGGCGCGCGCGACCTGCACACCGGGA
 TTGTTTGGACGCAGTACGGCACATTGCCGACCGCGTCCGCGATGTACAAATGCCGCTACC
 GCATCGCTCTCTGCCCCAAAATGCGGATGCGCGCGCAGGCTGGCAGACGGTTTGGCAGG

GTGCGCGTCCGCGCAACAAAGACAGTAAGTTCGCACTGATACGGAAAAATCGGGGAAAAATA
 TATAAAAAACAACAGATTGAGCCGAATTTCTGGATTAAAGTCGCGGAAATCGCGGTATAATTT
 GCGCGATTAAACCTTTATATAGTGGATTAAACAAAAACAGGACAAAGCGCAGCAAGCGCAGCGCA
 GACAGTACAAATAGTACGGAACCGATTCTACTCGGTGCTTCAGCACCTTAGAGGAATCGTTC
 5 TCCTTTGACCTAAGGCGAGGCAACCGCGTACTGGTTTTGTTAATCCACTATAAATCAGCG
 GTTTTTCGAGGCATCACACAGGAGCGACAATTTATGATGACCCCTCTATTTCGCGCATTTAC
 CTGCCCCCTCAGCCACGCGTTCGCGCTTCGTTTTGTACGAAAAAGGTATGGATTTTGAAT
 CAAAGACCTCGATATTTACAAACAAACCGAAGACCTCGCCGTCATGAATCCGCTATAACCA
 AGTTCCTGCTGGTTCGAGCGCGATTGGTGTGACAGGATCCAATATCATCAACGAATA
 10 CATTTGACGAACGCTTCCCCCATCGCAGCTGATGCCGCGCATCCGCTTATGCGCGGTGCG
 GGGCGCGCTGGTCTGTACCGTATGGAAAAAGAAATGTTCAACCAAGTCCAAGTGTGTAGA
 AAACCCCGCGCCACCAACAAAGGAACAGGCAAAAGCGCGCAAGCCATCGGCAACGCGTCT
 GACCATGCTTGCCTCTCGTTGAGCAAAAGCAAAATACATCCTCGCGCAAGATTTTTCTAT
 GATTGCTGCGCCTTGTCTCCGCTGCTGTGGCGGCTCGACCACTACGATGTCAAACTGGG
 15 CAAAAGTCCGCGCGCTGCTCAAATACGCGGAGCGCATCTTCCAGCGCGAAGCGCTTTAT
 CGAAGCACTGACACCGCGCGAAAAAGCCATGCGCAAAATAGTCCGAAATGCTTCGAAAAAC
 CCACCGTTTTGAGGCAATTTTCTATTTTGGCGTACAACACGGAACCCATTATGCCCAT
 TCCCAACCAACCTTACATCTCCGCGCCTCTCGGAATGGTGCAGCGACAAAGCCCTCACA
 CGGCATCTCTTGTCTGGTCAACGAACACACGCGCGTCCCCATGCAATGACGTCCGCGAC
 20 AACGAAATATGCTCAACATCGCGCGGACCGCCACGCAAAACCTTCAAATCGACAACGAT
 TGGATCAGCTTTTCGCGCGGCTTCGCGGAGCGGCGCAGATATATGGATACCTGTCCGA
 CAGCTCTCAGCGCTTTTCGCAAGGAGACCGGGAAGGTATGGGTTTTGAGTGGGAAGG
 TACCGCCCGGATACGCGCGCTGAAAAACACCTCTCGCGAAACCGCGCCGACCGCCCAAA
 AAAGGCTTGAATTTGTCAAATAAATCTATGCCGTCTGAACGGAATCGTGTTCAGACGG
 25 CATTTTGTCCGATGGGCGCAACCGGAATCTGTTTATCGCAAAACCGGTTTCGCGGTAT
 CAAAACCGGTGTTGCCCTGCGGATTCGATATGGGAATTTGAAATGCGCTCTGAACCTG
 CGATACGGGCTTCAGACGGCATTTTGTCCGATATTCGGGCAATCAGGCGGTGACGACGGC
 TTTAGGATTTTGTGACTTCGCCCATGTCCGGCTTACCTGCGAGGCGGGTTTTACAGAC
 CCCCATGACTTTACCCATATCCGCCATACCTCGCGCGCGGTTTCGGCAACGGCAGCTTC
 30 GACCTCGGTACGGATTTCGCGCGCGAAAGCATTTGGCGAAGGTAGCGGTGCACTACCTC
 GATTTCCGGGTTTTCTTTGTCTGCCAAATCCTGACGGCGGCTTCAGTGTAGTTTTCCG
 GCTGTCTTTTCGCTGTTTGACCATTTTGGTCAGGATGGCGGTGATTTGGCATCTGCGGC
 TTCGTCGCTTCGTCACCTTCAAACCTGTTTGAAGCGCGGTTGATGAGCGGATGTTGCC
 GAGGGAACATTGGCTTTTGGCGCGCATCGCGTTTTCTATGCTTCGTTAAGCGGATTTGCT
 35 CAGGCTCATGATGCTCTCGCTGGGATGTCGGATGGAACCGCGGGTTTCGATGCCGCTGTC
 AAAAGCAAAACACACCGCGAGAGCAGGTTCTGCGGTGTGCTCATATACAGGGGTACCG
 GTTAATCTGTACTTGAACGTTTTAGTACATTTTGGCGCGCAGTTGTTGGCTGCGCAGGCGT
 TTTTGCAGGCGTTTTACGGCTCGCGCTTTTTTTCGTTTTGCGTTGCGTAGTCTGTTTTTCG
 TAGGCTTCGCGGGCGCGAGCTCGGTGACGAGGCGGGTTTTTTCACGGCGGCTTTGAAA
 40 CGGCGCATAGCGACTTCAAATGGTTCACTCTTTTACGCGGATTCGACGCAATTTATTT
 CCTTTAATAAATTCGGTTGTTTCATCTGCCCATCATATCGGTGGAAGGGTAGGCGAGAC
 GGTGTTGAAAGTTTACCGTATCGCTGTGCGTTGCGCGGCGGGATACGCGCGGTGACGGA
 AACATCACTCTCAACGGGTGCGGTTGTGCGGTGTCAGCTGCTTGAAAAAGCAGGAAAA
 ACAATTTTCGATTGCTTATATTTATGTTTCGCGCTCAATGCCGTTTCGGGATAAAAAATG
 45 CCGCTGAAAGACCGGCGGGTTTCAGACGGCATCGGTACGTGACGCTGACGAGCAATG
 CCCCATCGCTGTTTGAAGCGGATGTGCGCGCGCCGAAGAGGGCGCGCTAGTAGGCGGCA
 TTGGCCATCACTTTTTGACATAGTCGCGGTTTCGGAAAAACGGGATGTTTCGCGCATAT
 ACCGCGCTTCGAGGGGCGTGTCCGCTGCCATCGCGCGCCCTGCCGCGACCGGGCTTA
 TAGCCTCGGTTGGCGAGGACTTCGTTGTTTTGCArCGCGGTTTGGTGTCCGCCATATAC
 50 CACGTCCCCATACGGATATTGCGGTGCGCGGTGTAAAGTTGTGCGGCATCCATACCGATT
 TTGCGCGGATTTCCGCGCGGTGGCAGGCATAACCTGCATCAGGCCCTGCGCGCCTACG
 CGGGATTGCGCGCCTATAACGAAGCGGCTTCTTGACGAATCAGCCCATAAACCCAAAGCC
 GGGTGCAGATTAACATTTTGCGGTGGCGGATACCGGTGCTTTAAACCGGGAATATTAG
 CGCAAGGTGATGTTGAGTTTGGGTGCGGTGCGTTTCGCGCTGTTGACCGCATATCGTAA
 55 AAACCGTGTGGAACGCGGTTTTCGCGCGGTCAGCAGCTGTCTTCGTCAAAGCCGCGT
 GTGGCAAAACGCGATTCCGCTGAGCCTGACGGCGATTTTGCATCAGCGGAGATTTGG
 CTGTTTTGGAACAGTACCAAGTGCGGTTTACTGCACGCTCTTCGCGCATGCGGCGGACG

CTGTTTTTGCCGGCATCGGGACATTTGTTGCGCGTATCGATTTTCCGACCAATTTCTTCC
 CCTGCCAGCACCGCATAAAAATTCCTGCCGCTCGCTGCCGCTGTTTGTAAAGTTTTCCTC
 GCCTCTTTGCGTGTTCGCCGTTGCGGCGCGGCTGCGTGCCAGCCAGTAGAGCCAGTGGG
 CTTTTTTCAGTATTTTCGGGCATATGCGAGATAACGGAGGCCAGCTCGTCCCAACGTCGG
 5 GCGCGCAAGCGCGCGCGGCTACCACTCGATTGGTCTGCGTCACTTGGCGCGGCTGCG
 GCAACCTTCGCGTAATAGTCCAAGCGCGAGGCACATTAGGTTTTGCGCACTGATATATGC
 CCCAATACGCCCCACGCGAAACTTGCCTGTTGAGGCTTAAACGCTTCCATTTCCGAG
 AGCAGGCGCGCGGCTTCCGCGATTTGCGTCTTCTTTGCCGATGACGCTTCAACAGGGCA
 TATTCCGCGCAACCTTGTGTACGCGCGTCAAAAGGGCTGCCAATGCGCGCGCAAGGTTG
 10 CGTGCGTCTGTGGTTTGGCGCGCGCCAGCAGTCCGCGCACGCGCTCCAGGCGTCTGTG
 CCGTCCCAACAGCCGATGCGGCTGCCTGTTTCCACAGTTTGGTGACAGCCGAGGAGCAGT
 TTGCCGCTATTTTACCAGTTTACGCGGCACGCGTATAGTCTGTGCGGCTCGAATCGGCG
 TAGCATTGCACTTCTTGGGCGCGCCTGCCGTTGCAATTTGGCGTATTCCTGTGCAAC
 AGCGTCCACTGTCTGCGTGCGCCCAAGACTTCAGCCACTCGTTGCGGACATTTTCCGCC
 15 ATCGCGCTGTGCGCGGCTTTTCCAAATAGGCGGCGAGCGCGCATCGTTTTCTGTGTTT
 ACTGCATCCAGTGGGACGGGTAGCGCGCTAATCTGCGAGCGTTTTCTTTCCGGGTTG
 GCAGGCGGGTGGGAACGCTTGCAGAAAGTCCGCGATTTCTATATGTTGCTGCCGGGCTG
 CTGCGGCTGGCAGTGTGTTTGTGCAAGAACACGCGCAAGCACCAGGCGCCGACGACG
 GGCAGGGAATGCTTCATAGCGGTAGGTACATCGGATTTCCCTAAGAATCGGAACCTCGA
 20 ACGGTCAAGGTTGGAAAGACAAATGCGCTCTGAACAGGCGTTTGGCCGAATATATATGC
 CGAAACGCGACCGCCTTTGGAATGTTTCCGACATAATTTATAGTGGATTAAACAAAACCA
 GTACGCGCTTGCTCGCTTAGCTCAAAGAGAACGATTCTCTAAGTGTGTAAGACCCAA
 GTGAATCGGTTCCGTAATTTGTACTGTCTGCGGCTTCTGCGCTTGTCTGATTTTTG
 TTAATCCACTATATGTTTTTCAATATTTGCGGTTTTGGTGCAGAACGCTGCTTTTGCC
 25 TTTCTCAGACGCGATTGTCCGAAATGGTTGCCGCTTCTGCTTTATGACAAAATAATGC
 TTTCCGATATATCTACGAAATTAACCTGCGGATTTGACACAGCTTGGCGGCATTAAC
 AGCTAAAGCTTCGACAAATTTACGCTTATCTTCCGCGCGGTTGTGTCGACATCGGG
 CTTTGTGTATGGAAAGCAATGATTATTTTGGACAAAGCTTCCAGCATTAACCAAGC
 CGCGACAAGACCGCTTTTCCGCGCTCGAGCCGACCGCTCGAAATCCGCGACGCGGAA
 30 ATCTTCGGGCTGATGGGTTATTTCGGGTGCAGGCAAAATCCACCTGTTGCGCTGATTAA
 CTGTTGGAACGCCCGACAGCGCAGGTCACAGCTCTGCGACAAGAGCTGACCGCGCTCGA
 TGCGCCCGCATTTGCGTCAGGCTCGGCAGAAATATCGGCATGGTGTTTCAACGATTTAATCT
 TTTGAGCAACCGCACCTTTCGCCACAATGTTGCCTTTCTTTTGGAAATCGCGGATGGCC
 TGTGAAAAATCAAAGCGCGCTTAAAGATGCTTGAATCGTGGCTTGAACGCAAGC
 35 CGCGCGGCACTATCCGCGCCAGCTTTCCGCGCGGCGAGAACACGCTGCGGATCGCGCG
 CGCACTCGCGCCCAACCCCAAGTCACTCTCGCAGACGAACCACTTCCGCGCTCGAACCC
 CGCCACACGCGCAGCGCTTGGAAATGTTTGAAGACATCAACAAACGCTTCAACGTAAC
 CATCGTCACTGTAACCCACGAAATGAGCGTCATCCGCGCTGTGCGACCGCGCGCTCT
 CTTGGATTAAGGCAAACTCGTCCAAATCGTCGAAGTACCGCGCAACCAATCCACGCCA
 40 ATCCGACATCGGCGCGCACTGATTCCGGAGGACTGATATGGCAGACTTAACATTCACAC
 AAGCGGTTTTCAACCAWCGTCCGATGAAGACGAAATCTTCCGCGCTTGGGCGAAACCT
 TCGTGAATGGTCGGCTTGTCCACCCATTTGCGCGTCACTTTCCGCGAGCTGCTGGGCGTG
 TGCCTCTGTAACCTCCAGCGCGCACTGCATTACAAAGCTGGTGAACCTCTGCTGCG
 ACAACCTCGTCAACCTCATGCGCGCTTCCCTTCTGTCATCTGATGATTCGATGATAC
 45 CGGCCACCGGCGCATCGTCCGACGACCATCGTCCGCTTGGCGCTCGCTGCTGTGTA
 CGGCTGTCGGGATGTTTTATTGTCGCGACTGGTGGAAACAAACCTGCGCGAGTCCCAA
 AAGCGGTAAATTGAAGCGCGCGCGGATGGGTGCGCGCGGATTGCGATCTCTGCAAG
 TCCTCTGAACGAAGCGCGCGCGGATGGTTTCCAGCATACCGTGTTCGCAATCGGCG
 TTTTGTCTACACGCGCGCGCGAGGATGATAGGCGCGCGCGCTTGGCGCACTCCGCA
 50 TCCGCTACGGCTACTACCGCTACCAACCGAAGTCAICATCTTTCATGTCGCCCTCTCTG
 TGTGCTGGTCACTCTGATTCAAAGCACCGGCAACGCGTTGGCGCGGAACTCGACAAAC
 GTTGAACCCGAATGCGCTCTGAACGCCAAACCCCGCATCCGAAATAATGCTATAA
 AATCCCTCTGTTCCGCGCAATGCGCTCTGAACGCCGAATCCGACGCGGAGGACTCCCTG
 CCGCTCATTTTTGTTTGAATCGCAACATCAGGAGAAAATATGAACCTCTTCTCAA
 55 AACCTTTTCCGCGCGGCACTCGGCTCATCTCGCGCGCTGCGGCGGTCAAAAGACAG
 CGCGCGCGGCACTCCGCTTCTGCGCGCGCGCAACGCGCGCGCAAAAGAAATCGT
 CTTCCGACGACCGTCCGCGACTTCGCGCATATGGTCAAGAACAAATCCAGCGAGCT

GGAGAAAAAGGCTACACCGTCAAACCTGGTCGAGTTTACCGACTATGTAGCGCCGAATCT
 GGCATTGGCTGAGGGCGAGTTGGACATCAACGTCTTCCAACACAAACCCATCTTTTGACGA
 CTTCAAAAAAAGAACACAATCTGGACATCACCGAAGTCTTCAAAGTGCCGACCGCGCTTT
 5 GGGCATGTATCCCGGGCAAGCTGAAATCGCTGGAAGAAGTCAAAGACGGCAGCCCGTATC
 CGCGCCCAACGACCGCTCCAACCTTCGCCCGCGTCTTGGTGATGCTCGACGAATCGGTTTG
 GATCAAACTCAAAGACGGCATCAATCCGTTGACCGCATCCAAGCGGACATCGCCGAGAA
 CTTGAAAAACATCAAAATCGTCGAGCTTGAAGCGCGCAACTGCGCGGTACCGCCGCCGA
 CGTGATTTTGGCGCTGCTAACCGCACTAAGCCATTAAGCAGCGGCATGAACCTGACCGA
 AGCCCTGTTCCAAGAACCGAGCTTTGCCTATGTCAACTGGTCTGCCGTCAAACCGCCGA
 10 CAAAGACAGCCAATGGCTTAAAGACGTAACCGAGGCTATAACTCCGACGCTTCAAAGC
 CTACCGCCACAAACGCTTCGAGGCGTCAAAATCCCTCGCCGATGGAATGAAGGCGCAGC
 CAAAATAGCGCAGTCGTATAAAATGATGCCGTCTGAACCTGTATCCGTCTTCAGACGGCATT
 TTTGTCCTTTAATCCGCGATTCCCTGCCATTCCGCGAATCCGCGGTATCGATTCCGAAC
 ASCGACAAAGCGTGTGCAACACTGTGCGCCACTATGTCGTCCGCCGTCTGCGGTTTGCGG
 15 TACATCGCAGGAACAGGGGGGAACACCAACGCGCCCATTTCCGTTACCCGCTTCATATTG
 TCCAAATGGGCAAGGTTTCAGCGCGTTTCGCGCACCATCAGCACCGCCGCGCTTTCC
 TTCAAACACCATCGCCGCGACGCGTCAGCAGATTGTGCGCGAAGCGTGGCGGACGAG
 GCAAGCGTTCGCTATCGAACAGGGGCGGACGACATCCCATCCGTTTAAACGTACCGCTG
 GCAATGCAAGCCCGATATTGCGGATCGGATGCAAGTTCGCGCAAGGCATATACCTCG
 20 TCTCTCGCATGAAGCGTTTCCGAAGCGCGCGCATCTCCGCACCTTCGATACCAACAGG
 TCGCTTTCGACATCTTGGCGCGCAAAAGTTCCAAAGCCTTCAGCGCGATTGGAAACCG
 CTCGCCCGCTGATCCGATTATCAACCGCGTACCATCATCCGCTTTCCCATTAACCC
 GCCTGCAACGGCAAAACCGGCTATTATAGTGAATAAAACAGAAATCCGATAAACCGCGAT
 25 AATTTGTGCGCAACACCAATATCCGATATAATACCGATTAAACATCCTATCGAATAG
 GCACGGGAGGCGGATATGGCAAAAGTAAAGCGGATTGGGCGCGGCTTGATTTCGCTG
 CTCGCCAACGCGCGGCAACAGCAGCGCGCGCGATTGACCACGGTTGCGGTTAAAGAT
 ATCCGCGCCGCGCGCTATCAGGCGCGTGTCAAATCGATGACGAAAGCTTTCAGGAACTG
 GCAGATTTCGATTAAAGCGCAAGCGGTGATACAGCCCGTCATCGTGCAGCAACCGGACTG
 TCCGATACGAACTGATTGCAAGCGCAAGCGGCTTGGCGCGCGCACAGATTCGCCGCTG
 30 ACCGAAATCCCGCGCTTATCAAACCATCAGCGACGAAACCGCATTGCGAATGGGTTG
 ATCGAAACCTCCAGCGCAAAACCTCAACCCCATCGAAGAAGCACAAGGCTTGAAACGC
 CTTGCGGACGAGTTCCGGCTGACCCACGAAACCATGCCCAAGCCGTTCGTTAAAGCGCA
 AGCGCGATTTCACACGCTTGCCTTTTAAAGCTGCCGAACCCGTTCGAGAAATGCTT
 TACCACCGCGCTCGAAATGGGGCACGCCCGCGCATTTGCTGACCTTCGCCGTCTCGGAA
 35 AAGCTCGAATTTGGCGCAAAAGCCGCTCAAAACCGGCTGGTGGTGCAGGAGTCAAGCG
 CGCAGCCAGGCGCCCTTCAAAACAAACGTCCGAGCGCAAAAGACTGCCGCGCCGAC
 ATCGGCGCGCTGAATGATTGTGACTGAAAACTGGGTGTCAACGCTGAAGTCAAAAC
 GCCAACCACAAAAGCGAGGATTGCTCTGTATTTCGATACGCTGAACCTTCGCGCAC
 CTGCTGGAGCAGTTGGGCATAGATTACGGCCCTTAATTTTGGCGGATATACCGCTGAA
 40 ATAGAGAAATAGCTTTCAGATTTTAAAGTGGAAATATAATTTCTATTGACATTTTCTGCT
 TTCAGTAAGAATCGTTTTCCTGTTTTCATTTTAAATTTTGAAGAAATATGAACACAC
 GCATCATCGTTTCGGCTGCGTTCGTTGCGTTGGCATAGCAGTTGCGGCTCAATCAATAA
 TGTAAACGTTTCCGACTAGAAACTTCAGGAACGTGCCGCGTTTGGCTTGGGCGTCAGCCC
 45 AAATGGCGTAAAAATCAGCAACCGCAACATGAAGGCATACGCATCAACTTACCGCAAC
 TGTGGGTAAAGCGCTGAGCCAATGCTATGTTACAGTGTAAATCAGCACAAATCGGCGTTAC
 CACTTCCGATGCAATTTGTTTGGGAGCGGAACGCACAAAGGCAAAAGTCAATGCAATAT
 TTTGCTTAAAGCGCGAGGCAATTGCTAATCTTTATTTCGAAAGGTCGCTGAAATAT
 TTTTCAGACGACCTTTTATTATTGAGCAAAATCCCAAACTGCCGCAATCCGACCGATA
 AACTGCTACAATTTTCG

50

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 282>:

GNMCL71F gnm_282

CCGAAGTTGGATCGCTCTAGAGGATCCCTGCCGATGTAGCGCGCTCTGGTACGGGCAT

AATGCCCTGGGCTTCTCCTGACTGCCGGCTTCTGGGTATGATGTAATTTTCGTACCC
 AAACAAGCAGCCGCCCGCTTACTCCTACCGCCTGTCCTGTTCACTTCTGGGCGGTG
 ATTTTACCTATATGTGGCGGGTCCGACCACTTTCACTACACTCGCTGCCCTGACTGG
 ACGCAATCTTGGGTATGTTCTGTCTTTGATTCTGTTGCGACCCCTCTGGGGCGGTATG
 ATTAACGGCATCATGACCTTGTCCGGCGGTGGGACAACTGCGTACAGACCCGATTCTCT
 AAAATCCCGGATGGAACCTTGTCTCTACGGAATGTCTACCTTTGAAGCCCGCATGAT
 TGTGATTAAACGGTCAATGCATTGAGCCACTATACGGACTGGACCTCGCGACCGTTCA
 TCGCGGTGCGTTGGCTGGGTAGGCTTTGTAACCATCGTTCCGCTATTACATGATTCC
 CGTCTGTTCCGCAAGAACAGATGCACAGCACCAAGC

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 283>:

gnm_283

TTGAACAGGTTACGAATTTGTGTTGAATTTGCCAGCGGGCCGGTGGTATCAACGATTT
 TTTGGGTGCCGGTATAGAACGGGTGGCAGGGAGCAACCTCGATATTGAAGTTTCTTT
 TTTCCATCGCGGATTTGTTGCGAATTTGTGCCGCAAGAGCAGGTAACTGTTGACTTCGT
 GGTACTTCCGGTGAATACCTTGTTCATTGATTTCTTTCAAAAAAGCGGCGATAGGGG
 ATGTACCTATGCTACAGACAAGTCCGACATCTCGCTATTTCTGTTGTTACGTCAAGAG
 TATATTTCGATAAAATGTATAGTGGATTAAACAAAACAGTACAGCGTTGCTCGCCTTGC
 CGTACTATCTGTACTGTCTCGCGCTTCGTGCTTGTCTTAATTTTGTGTAATCCCATCT
 AAAAAAGTTCTTTGAGGGAGGTTTGATGGGATCAAAATCTTTTCTCGTCTGCGGTT
 TGCCGGTTCGGGGTGGCCCGCTCACATATGCGCGCATCGGCATCGTCGCGACAGCGGT
 CGCGGGTTTTTGGCGCGGCGGGTTCTCCGCATATCGGACGCGGGGTCAATATCGAAGC
 CGGGGCGATGTGTTTCCGGATACGGTTTGGGCGAGCGGCTCGGGCATCGGGGCAAACTG
 TGAATCTGCGCGTGGCTGTGTGTCGCAAAATGTGATGATGAGCGCGGAATGTCTGTT
 TTAATCAATAACCAAGTTTGACCGTTCAAAAAACGCTTGAAGGCTACACGGAATCT
 CGTCCGATTACGTTGGAGGACGATGCTGCGCGGGGACACAGGTTGATTGAATGGCGGCG
 GTAACCGTCGGACGCGGTTTCGTCGTGGGCGCAGCGCGTGGTTACAAAAGACATTCGCG
 CTAATCTTTGGCGGCAGGCAATCCGGCAGTGGTGAAGAAGTCTGCGCGAAGGTTGAA
 TGCCGTCTGAACGTGTGCGGGCGGATGATCTGAAAAAACAGGAACATCGTTTCTGTTTT
 TGCCTTCAGACGGCATCGCTATTGCGCCACGCGCG:ATCGATATCTGGTAGAGTTTGC
 CGAATCTCGAGGTTTCGCGACGTAGGTTTGAGGATTTGCGCTTTTTCGCGCATAGGACGG
 AAGTCGGATAAACCTGTGTGCCGAACGCTGTCCGACAGCTTTTTCGCGCATACATATGA
 CCGTAACCGGCAAAACCGTAGTCTTTGACATATTGGCGAGCGCTTCTATCGGATCGATGG
 GCTGGGCGACGGCAAGTACTTTGGAAGTTTGTGTTTATAGTCATTGGCGTTTATAGA
 TTTTGGGCATWTCGCTCACACAACCGGACAGGAGGAAACCAAAATTAATCAGGGTTA
 CTTTGCCTTGCAGGTTCGCGCTTGGAAACGTTTTTCGTCAGGTCSGGCAGGGAGAAGG
 CGGGCGCGGTTTTGCTGTCGGGGATGAGGACGATGGCAAGGAGGATGCGCATCAAGTGGA
 GACAGGCGCGCGGTGAGTATTTTTTCATTCCGACAAGGCTTCCAATGCGCGGGCAGGGT
 GCGCGGACAGGTGACGGTGCCTTGTGTGCGCGCTGACGGGCATCAGGGTGAATGTCGCG
 TTTCTGCGGCGGTTTTGCGGTTTGGCAGTGTAACTCGTCTGACACAACTACGGCGGCT
 GCGCGGGGTTTTTCAGGCGGCATGAAAATGCAATACGCTCGCTTGCAGCGGCGGGCGGCT
 GTATCGGATTCGATGCGGGCGACAATCAGTATGAGGCTGCCAATCTGTCGACAGCTCC
 CGCTTTCTCAAAAAACGCCACGCGGCTTCTTCAAAAAATTCGAGGTAGCGCGATTGTT
 GACATGCGCGTAGCGCTCGAGATGGTAGTTTTCGCGACGCGTCACTTCATCAGTTCAAGTTG
 ATGGCTTGAAGAAGCTTCGCGGCAAGCGGTTCTGTTTCGAGGTGCGTGATGACGGTAGAA
 ACGTGGATGTCGAACATTCTGTTGAAATGTGCGCATCGAGCGCAGGCGCACTCGGCTTCG
 TCTTCGCCACCACTGCGCAAGTTTCGCGGCGGAAAAATGTCTTCAAAACGGGCTTCGATTTC
 TCCCACTACTCTGTCGCGGTTTTTCGACGCGGCGGACAGGTAGGAATTTGGCGTCCGGTCTGA
 ATGCTTCAAGAGTCAGTCCGTCGAGTGGTTTTCGCGGAGGGTTGCAAGCCAGTTCCA
 AAAGGTTCTAAAGGGATGAGGACGAATACGCTCGGTTGACTTCTCATATGGTTTTTCTCT
 TTGCTGTCGCGCGGTATGCGCAAAAAAGAGATTATAGCCCAATCTGTGGTTTCGAGTCT
 CGGTTCCGACAGAAGGGAATGCCGTCCGAACACGGAATTTTCAGACGGCATGCGCTTAAGG
 TTGTGTTCCAGGTTGCGGTTTCGGCTTCCCTGCTGCTCTGCGCTGTGTTTCGGATACGGA

ATCTTCTTGAACGGCAGTTTCCGCGCGCGCGTTTCGGCACTTTCGACCAATTCGTGAT
 GTGATGTGTATCTTCCGTACCTTCGGCAGGTGTGCACCGGTTCGCCGCGCAGCGACTT
 CATATAGAGGTGCGCGGTGTAGCTGTATTTGTCGATGGCGGCTTCGTCAGACTGTCGTG
 5 CAATCGAGCAGGCGCTTCGCGCGTACTGACGCGGGATACGCGAGTCGTGCCCAAGCGTCC
 GACAGGGGTGCGGAAGACGATATCTTGGCGGAATAACGGAGGTAATACCCGTGCCGAG
 CGCGTCGCGGACGGTGGACGCGCCCTAAGACGGGCAACACGAAATATTCGTGTTTTTCCA
 TCCCGACGAGGCAACGTGTGCGCCCAAGTGTATTTATGTCGGGAATGCCGCGCGCGC
 GCGATGTGCATAAGCCCGCCCAACCGAAAGTGGTGTGATGCCGACGCGGACAGGTC
 TTCGCTTGCGCGTTTGATGTCCAAGCGCAAGATATTGCTGCCGAAGCTGACCAGTCGCA
 10 CAGGTTGTTAAAAAAATTTGGACACGCGCGCGGACGGGTTTCGCCGAACCTTTGCGGTG
 CGCGCGCGCGCAGGGGCGAAAAATGTAGCGGTGCGGCTTGGTCGTTGAATTTGAAAACCGG
 GCGGTTTGTAGCCTTCATAAGGGTCGCGCGGCGGGTTCGCCGAATGCAGGGCGGAAGC
 GAAACCGGATCAGCAGGAGGAAGGCATAGCGGTTTTTTTCATGATTCAGCCAGTCTTTG
 15 ATTTTCGTACAGTTCGGACAGCGCGCGCACGGAATTCGGGAATGCCGCTACGCTGACGCTG
 CCTTTGCAACCGCGCAGCACTTCGAGCAGCAGCGACACGAGCGGAATCGCGCGCTCCG
 ACGCGCTCAAAATCAACCGCGCAGGTGTCTTTTCAGACGACATTGCTGTCTGAAGCGGTA
 AAGCGCGCGCGGTGAGGTTTTGACGGTGATGTCCGCCCGGATGTGCAATATTCGGTTT
 TTGAGTTCTGTATGTCATAGCCTTTGCTCGGAAAAACCATACCGCCTCGGACGGTATGGT
 TTTGCGGTTATTTGCCGCGGTTTTTGGCTTTCAACTCGGCAATCAGTCGCTCCACGCGCTT
 20 TCGCTTTGATAAATTTGCCGAATTTGGTTGCGGTACACGGTAACCAAGCTTCGCGCCTTCGA
 TGGCGAGCTGTAGGTACGGTATTTACCGCGCTTTGGTAGGTGGTGAAGCTGTGGA
 CGGGTTTTTGCCCGGGTACGCGACTTCGGCGCGGACGATGATTTCTTTGCCGCGCTTAT
 TGACGATGGGATTTGCTTTGACGTTGACGTTGGCGTTTTTAATTCAGCATCGTCCGCG
 25 AATAGGTGCGGATCAGCAGGTTTTGAATTTCTTTGGCCAAACGCTGTTTTTGCGCGTCGG
 ACGCGGTGCGCCAAAGGTTGCGCAGCGCAATGCGGTATACGTTGGAAATCGAAATAGG
 GAATCGCATAGGCTTCGGCTTTTGGCGAGCGGTGTGGCATCGCCGTTTTTAAAGATGC
 TCAATACCTTGAGTGGCGTTTTGACGATTGCGCTTACGCGTTCGCGAGGCGCGCAATG
 CCATGCGGATGCTCAAAATACCGATGCCCAATGCGCTGATGAGGAGGATTTTTCATGA
 TTAAGTGTCTAGTTTGAATATGATGGCATACGTTTATTCGCGCGCTTTTCCGATTCG
 30 CGCGTCGCGCATTTTTCGCGCAAACTCGTCATGAATTTGCCGATAAGGTTTTCCAGAA
 CCATTGCAAGCTGGTACGAGATGGTGTGCCGCGCAGCAAGGTTTTTCGCTGTCCGCGC
 CCGCTCGAGCCGATGTACTGCTCGCCAAAAAGTCCCGAAGTCAGGATTTGCCGCGAAA
 CGTCGCTGCTGAACATGATACTTGCGCTCAAAATCAGGCGCACCTTCGCTGATAGGATT
 TCGGGTCAAGTCCGATAGCGCGCAGCGCGCCGACCAATACGCTGCGGATTTGAACGGGG
 35 CATTGACCTTCAAACCGCGGATGTGCCGAAATCGGCATAAACCGCGTAAGTTTTGCGC
 AACCGCGCAACGCCGACCGCGCGGCAACGCGGAAAGCAGAAAGCAACCGCGCGCGC
 CAATCAGGACGAACAGTCCGACCCAAATTCCAATATGTTCTTTTCATTAAGTTTCCTT
 GAAATCCGATGTTCCGCGTTTCGTCTTCAGACGGCTGTCAATCTGTAACCATCCACG
 GGTCAATATATAAATCGACCGCCAAATTCGTGAGGCGGACGAACCAACCGTTCGCGCTGCT
 40 GCGCGCGCAAAATGCCTTCCGAAGTCGGGACCAATGGAAGCCCTGATGCACGGCAATCAG
 TGTACCGCGCAGCGGAACGCGGGGATTTGATCAGACCGTTGATTACATCGTAATGTAT
 CGTGATGTTGTTCTGCATTTGCGACGAGAAATACCGCTGTCCAAGCCAGCGAGGTTAC
 ACCAACCAATACGCAACCGAAAAATGCCGCCACGTTGAAATCGAAGCCAAAGCGGGAT
 GGAATAACCGCGCGCCAAAGCGCGCGCAACCGCGGCGACAGGTTTACCGCAT
 45 CACATTCATCGCTTCGAGCTGTTGCGTGGTTTTTCATCAGACCGATTTCGCTGGTATCGC
 ACCGCGCGCGCTGCTGGCAACAAATTCGCTGCCAATACGCGACCCAGCTCGCGCAATAG
 CGAAGCGCGGACCATATAGCCCAAAATATCGCGGATTTGAATTTGCACAACTGCGGTAT
 GCCCTGTAAACCAAGACCATGCCGCAACACGCGCCGAAACGGCAACATCAACACCGA
 CAGCACACCGCGCAATACACTTGGCGCACGCTCAGGCGGAGCGGACGAACCGCTACC
 50 GGACTTCGCGAGAATGTTACGAGAAACAGCGTGATACTGCCGAGGAGTTGAATAGGCC
 GAGGGTTTTGCCCGGACGGAACGGATAAAGTTCATAAATTTCTATGTGTAAGTTCAAC
 GGTTTAGACGGCATCAACTCATTTATCCACAGGCTCTGTCGCAACGAGCTTTGCCGC
 GGAATACGGTATGCTACGGGGCGGTCTGCCAGCCGCGCAACACTGGCGCACCCAAAGC
 55 GAATCAAGTTTCGCGCATTTCTCGCGCGAGCGGGAACATAATTTCCGCGTGGCGCAAG
 AAAATCACTGATCGACGATTTCCAAGATTTTCAATGCTGTCGTCGTACCATAATACGT
 GTCGAACGCAAGGCTTTGTCAGCGGCTGATCAAGTGGGCAATCACGCCAAGGAAT
 GGAATCAGAGCGGTAAACGGCTGTCGTACAACTAATTTACGGTTCGAGCGCAATCGTG

CGGGCAAGCGGACGCGGCGGACATCCCGCCGGACAACTCGGACGGCATCAGGTTTTCC
 ACACCGCGCAGACCGACCGCGTCAATTCAACAAAACCAATCCCGAATCAACGCTTCC
 GGCAGCGCGTCAGTTGCGGCA⁵TCGGAAAAGCGATATTGTGAATACCGACAAATCAGTA
 AACACGCGCGCGTGTGGAAACAACGCCCATACGCGCGCGGTGTTCATACAACTCGTCA
 GCCGAAAAGCGCGCAAAATCCCTCCTTCAATCAAACCTGCCGCGACTCGGCAGCAATC
 GTGCTGTAAATCAGTCGCATCAGCGTGGTTTTGCGCGTGC¹⁰CGGAACGCCCATACGGCA
 GCAAAATTGCTTCGGGAATGCT¹⁵3AAATTGATGTTCTTCAGAATCGGGCGGTGCCATAC
 GCGAAGGCGACGCTCTTCATTTCTATAAAGGGGATGGGCTCATGTACGGACGGACGGTA
 GGTTTGACGCGGTGTATTTTAAGGCTATCGGGAAGACGGGCAATTTTCAGACGGCATAC
 GGCAGGTAAATGTTGTGAAAATGCGGTTGTCGGCGGGGATTGTTTGTGTGGCGAAAAA
 TGTATCTTTCAAATGATAACCTTTATCAGAAAACATGGAAAAGCAGAACATTTGAAC
 AGCAGCGCGTTTCGTAATCTAGTCAAAAGCGCGCGGACGCTATGTGGAGGCGAGCTAC
 CGTTTTCGATACTTTGTCCAACGGCATTTCATCCACGCGCGCAGATAACGGCAGCGGT
 GATTTTTCAGCAGCGCGCTCGCGAACCTTATGTGTCGTTCTGTCTCTTGTGGAAGGC
 AGTTTGGACTTCGGCATCAACCGCTGCGCGTTC²⁰CAAAATCGATGCGGACGGCGCAAGATT
 GTCTTAATTGCTGTCGGGGAAGAAGTCTCTTCAGCGCTATCTTTACCGAGGCGGCAAA
 ACGGTCAAAATGACCATTAAAGGTATGGAAACAATGGCTGCTCGTCCGGAATACCGCGT
 TTCGACCGGCTGCTTTACCGCGACCGGTCAGGATATGGGATTTCGCCCGAACCTGCGC
 GCGTTGCGGCATCTCGCTGAAGCGCTGCCAAGGGGCAATTTGGGCGAAACATTGCGC
 CGCAGGCGGACGCTGTTGCGGCTGCTGTCGGAATTTGGGACACGGTTTCAGACGGCATC
 GGGCGCGCGCGGGGCAAAACGGCGGAAGCAGACGCTATGCCGTCTGAAGACTTCACGCG
 ACCCTAAATGCCGCGTTTGCAGCGGCGACACCAAGTCAACCGGCTGACAGCGCGCTG
 AACATCAGTGAAGAGACGCTGCAACGCGGATGCGGCAACATTTGCGCATACGGCAAGC
 GAAATGGCTGCACCAAAACAATGCGACGCGCTCTATCTGTTGCAAAACGGGGGAAAA
 AGCATAGGCGAAACCGCATATTTATGCGGCTACCGCCACGTTTCAGCTTTACTCAGGCA
 TTCAGGCAATATTTTCGGCAGCAGCGCTGCGGAACCAAAAAGAAAACCGGTAAAGCGCA
 TTTGATTTCAACCCGAAATCCGCGTGTATAGTGATTAAACAA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 284>:

30 **gnm_284**

CTCAGCAGTATGGTTACCTCAGGCGAGGCGGACTTGGCGATTGTTACGGAACGGATAGAC
 GACCATCCCGAACTGGGAAAACTCCCTGCTATGACTGGACTCATGCGGTTATCGTACCG
 AACGACCACCCCTTGCTCGAATGCAGAAACCCCTCCGATTGAAAGATTGGCGAGGTTT
 CGCGTATTAATGAAATTTGCAATTCACGCGGCGAGCAGCATCGCGCGGCAATTTCC
 35 AAAGCCCGTTTGGAAACAACCGATGTCGCATTTGGCTGCGGCGAGATACGGACGATTGAAG
 ACTATGTGCGCTTGGGTTTGGGCTGGGACTGATGGCGAAAATGGCGTACAAACCCGAT
 ACGGACGGCGATTGACAGCTGTGGATGCGGCACACCTGTTGAGCGCTCGCGCAGCTGG
 ATTGCTTTGCGCAGCGATACCTATTTGCGGCGATAGCTACGACTTTATCCAAAGCGTTC
 CGCGCGACCTGACACGCGAGAAGGTGGATAGGATTCTGTACACGCCCATCAGCGAGGAT
 40 TTTTCGATTTAGGCGGCTGCGGTTTTTCAGACGCACTTTGCGGAGATACACAAACAG
 GACAGATGTTTTCTGCTGCGCTGTTTATTGAGAAATGCTGTGAAATGTTGATACGGG
 TTAATCAATGGCGTGCAGCAGCGGACACCATTTTTTCAACACCTGCAAGATTGAGGA
 TTTGATGTGCTTATGCTCGACGGAATCAATCTTCCTGATGAAATTTAGATTAAGTTGTCG
 GGCTGACGGTTTCAAGTTTCAGCGCCGAGATAACTGCCGATTCTTCGCGGAGACATCTTA
 45 AGATGAAGTCGTTGGCAGCAAAACCTCGGGAATAAAGCGTTGGGAAAGGTTTCAGCAGGA
 AGGCGGCAATTCGCTCTTCGCGCGCATATTGCCCAACAGCAGCATAAACCTTTGGTCGC
 GCACGATTTACGCGCTCATCATGCGGAAGAAGTGCATACGCAAGCTGGGAGTGTTTGCG
 CCAATCTTCGATGTGGGTAACGGCAGTTGCGACACTTCGCTGCTTCCAAGGCGAGCG
 CGTGCAACTGTGCACATGGGAACAGATGCCGTCATGCGGATGAGTTGCGCGACATAA
 50 AGA⁵AACCCGTTACCTGATCGCGCGCTCTGACTGGCGACGGTTGTTTGAAGAAGCCCG
 AACCGATTGGCAAGAGCAGGTTAAAGCGCTTCGCGACACAGAACAGGATATTCGCCCTTT
 TCAGGCGGCGGCTTTGACGGATGACGGCATCGAGTTGGCTGAGCTCGTTGGGCGACGCG
 CGACAGGCGAGGATTTCCGCAAAAGACAGGAAGAACAACAGCGTTTTCATCTGATGTG

TAGTATTATGCGAAGCCATACCGTACCTTTTGTGCGGCTTTGCCCATCATGATTATTAGT
 GGATTAAATTTAAACAGTACGGCGTTGCCCTGCCTTGTCCATTATTTAAATTTAATCCAC
 TATATGTGCTTTATTGACACATATCAAGACAGGTTTATCATACTGTGGCATTCTACCAAAAC
 5 TATCCAAAATTTGACTAACATCATAAACCGCACACACACCATGAAATTCATTGAGAT
 ACAGAAACATCACATGTAAACGATGACCGCCCGAGTTTGACCGCGCGCTGATTGCCAG
 CTTGCCCGCCAGCGCGCCGCGCTACACTTCCTACCTACGCGCCAGCCGTTTCCATGAOCCG
 TTTCCGCGAAGCGGAATATATCAAGCTTTACATTTGCGCGGTATGGGCGCGTTTAAACAA
 ACCGCTTTCCCTTTACATTCACATTCGGCTTCTGCAACACCATCTGCTACTACTGCGGCTG
 10 CAACAAAATCATCAACAAAGACAAAAGCGCGCGATGCTACATCGAATATCTTAAACAA
 AGAAATGGAATGCTCGCTCCACATCTGAACGGACGGCACCAGCTTGCCCAACTGCACCTT
 CGGCGCGCGCACGCCGACCTTTTGGAGCGACGACAGATCGAACGTGTCTTCCGCATGAT
 ACGCAACATTTCGAGTTAATCCCAACCGCGGAATCTCCATCGAAATCGACCCGCGCAA
 AGTCAGCCGCGACACCGTCTCATGCTCGGCAGACTCGGCTTCAACCGCATGAGCATCGG
 15 CATTCAGGATTTTCGACCCCAAAGTGCAGCGCGCGGTCAACCGCATCCAAAGTTACGAAGA
 AACCAGAAAGATCATCGATGCGGCGCGCGAAGCGGGGTTCAATTCGCTCAGCGTCGATTT
 GATTACGCGCTCGCGCACGAGACTTCGGAAGCATCAAAACCAACCATCGATACCGTTT
 GTGCTCGATCCCGACCGCTCGCCCTTTATCACTACGCCCACTTCCGCGACGTGTTCAA
 ACCGCAACGCCGATCGATACCGCGCGCTTCCGACAGCGAAGAGAGCTCGATATGCT
 CGAATACTGCGTCCAAACCTTAACCGAAACGCGGCTACGCTTCATCGGCATGGATCATTT
 20 CGCCAAACTGTACGACGAACCTCCATCGCCCTCAAGAAGGCTTCTTCAGCGCAACTT
 CCARGGCTATTCGACCTACGCGGATTCGAGTTTGGTCGCCATCGCGGTGTGCTCATTCGG
 CAARATCGCGAGCACTATTCCAAACGACGCGCATCGATGCTACTACTCGGCCCAT
 CGACGAAGCGAGACTGCCCATCATGCGCGGCTACCACTCAATCAGGACGACATCTCTGCG
 CGCAACCATTCAGGATTTGATGTGCGCTTCCGCGCTCGACTATCGGATTTACGAAG
 25 TATGTTCCGCATCCGTTTCGACCGCTATCCAAAGCAACTGGCGGATTTGGAAGAACT
 CGCGGCTTTGGGATTTGGTGGCGCTGAACAGCGACCGGCTGACCGTTACCCCGAAGGACG
 CTTCTCTATCCGCAACATCGCATGGTCTTCGATTACCACTCGCGCATAAAGAAACAA
 GCGCAATATTCGCAACAGTGTGATTGTGGCTAACGTACAAATGCGGCTGGAAGGGCTT
 TTTGACAGGCGCATTTGCTGCGCGCAGGATAAGTGTTTCAAGAACGCGCGCGGCTAT
 30 CATACGCTTCGCGACCTTTGTGTCGCGCGCTTCCGAAACCAAGATATAGTGGATTAAACAA
 AAACCGTACAGCGTTGCGTCCGCTTGCCTACTAGCTGTACTGTCTCGGCTTCGTGCG
 CTTGTCTGATTTTGTAACTACTATACCAACCGGCATATCCGACAGAACAGATTGTG
 CATAAAGCAAGCGCCGACATTCATCAACAAATGCGCTCTGAACACGGGTTTCAGACG
 GCATCAGTATTTTACAATCAGAATACTGCTGTAAACCAAGTAGCAGACAAACCGCAAT
 35 ACGCGCGCGCAGCGAGGTAATGACCACGCGCAACCGATGGGCTTCATCAGTTTCCAG
 TTGGCATTTGCGTTTGACCAGACCGATACCGAGTACCGCGCCGACCAAGATATGCTACTG
 GACACGGCGCAGCCCATCAGCGACGCGCCCATCAGCAGGAGGCGCGGACAGCTTCGCGG
 GTAAACCCGAAAGCAGGATGCATTTCCGCCAACTCGTACCGACGCTTTTAACTCACTCT
 40 TTACCGACAACCAACCAACGACAATCAGCGCGATGCGGAAAGTCAGCATCGCAATTCGGG
 GGGACGACATTTGCGCGGCAACGCTGTTGTAACGCAAAACATCCATAATCGCGGCAAC
 GGACCGATGGCGTTGGCGATATCGTTCCGACCGTGGCTGAATGCGAAGCCGACGGGTA
 AAGACTGTCATCCATGAAACATCTGAAAGTGCATTTGCCAAGTCTTAAAGCTTGAGG
 CTTTGGCAAAACAAACGCTCCCATCCACACGCGCGCTATCATAAAGATGTCAGG
 45 AAGCTGTGACGTTGCTCATCCCAATGCGAGTTTTTCAGGCCCTTGAAATCAGCAT
 CGCGAAATCATCATCGCGCGAAGCAGCATAAAGGGAATCCAGAAATCAGTGCCTTG
 TAGGAATCGACATTTGTTTACGGTTGTGCAACGCAATAAGACCGCGGTAACTTCGAT
 TCGAGCTCTGCGGATCGAATTCGGGTTCTGTGTAATTTGCGGCTCGTGCGCCATTTTG
 GTGGCGTACTCGACTTTTTCGGCTTCGGAACAAACCTCGAAACACGCGGTGCGGCTTCT
 TTTAGCGCTTTTTTCTGCTGTGATGCGCTTGAGCGTGCTTCCGCGCAAGCGTTGTAA
 50 TCTAAGACGTTTTTCTGACGCGGAAACAGAAATAGGACACCGCGCGCCCAACAG
 GGGCAACATACCCAAGAAACCAATACCGCCAGCTTGCCCAAGCTATCAAAATCGCC
 GATGCGGATCGTTTATTACCGCATACATACCGCGCTGCGGACATGCGCGCGCTAATG
 GAATGGGTGTAGATACCGGAAGCGCTTTTTCGAGCAACACAGCCACAAACCGCGCC
 GGCAAAGCGCGACATCATAAACACAACTGTATGGGTTGCAATCAACACCGCTTC
 55 AATTCGACGATGCTTTGCGTATGGTATGGTTACCTCGCGCGCGCGATGACCGCGCG
 CTGACCTCAATACCGCGCAATCAGCAAGCGTGGGGATGGTCAGCGTACCGCGACCG
 ACGCTGGTCCGAAAGAATGGCAACATCGTTGCGCGCATGTTGAACGCCATTAACACG

CCGG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 285>:

gnm_285

```

5  CGTGGAAATCGGCTCCGTAATAATTTGACTGCTCGGGCTTCGTCGCCTTGCTCTGATTTT
   TGTAAATCCACTATAATATTTATTTTAGCGGTGTAACAAACCGGCTGCATACCTGCAAC
   CGGCCTCAAAATCAGCACAAATTCCTTATCCAAATCCGCCAACAGGTCTTTCAGAGCGTCTC
   CGATTTCCTGAAGCGTAACCGGACGGTTGCCGTCCGAACCCGATTCCGCACCTTCTGCAT
   ACGGTGCAAAACGTGCTCTGCAATTTCAACAGTTTACCACATCCAAACGGGTGTAGCGTT
10  CGCCGCGTAACCGCAACCAACACCGTGATCATGTCGCCATTGCGCAAAACCATAGGGGG
   TGATTGCAACAGTCCGCACAACCTCGTCCAGCGTAAATAGCGTTTTCGGGAACCTTCA
   AATCAACGTTGTTTGTATAGTAGTGTTCACCATGCTTTGAGTTTCTGGCTGGCATGG
   AAGTTTACCACGCGCGGGCGGTAATCGGCACCTTCCCTCGCGGTTTAGGATTACGACCC
   GGGCGTTGCGGCTTGTGCGCAACTGGAATTTCCGAAACCGGAAATTTTGATTTCTCG
15  CGGCTTGCCAAAGTGCTGCGGATTTCTTCAAAAAGAGTTTCGACGATTTCTTTGGCATCG
   TTTTGGTGACGTTGCTGACTTGCTACCAAAATATCGGCCAGTTCTGCTTTAGTGAGA
   GTCATATGATTACCTCTGTTGTAACAGTTGTGGATTATTACCAATTTTATTTAAATTT
   AAAGCGAATATTTATTTTAACTGCGAAGCGCGCCCTGCGCGGTTGCGCGGCAAT
   CAGTTTTCGATAAGCGGCTGCGATGCCCTATCCGTCAGCGTGTTTTCATATCCTGCAA
20  AATCACTTTGACCGCCACGCTCTTCATCCCTTCGGGCAGTCCCGTGCCGCGATACACGTC
   AAACACGCTGATTTCTGTACCAACTGTTTTCGCGCGCTTTCAAGACAAGCAGCAATTC
   ATCATCGCTATAGCTTCGCGCATCAAAACGCCAAATCGCGCGCACCGCTCGAATTT
   CGATACGACCCGATAGCGGCTTTCCGCAATCCAAACGCGCGCATATCGATTTCAA
   TACCAGCGCGCTTGCGGCAGTTCGATTTTTCGAGCCATTTCGGATGCGAGTTCCGCGAC
25  AAAGCCGATGACTTTGCGCTGTAACAGCATATTGCGGCGAGTCCGGATCGAGGCGGG
   ATGTCGCGTTTAAACGAATCGATGCTTTGTTTTCAACAGATTTCACGCTCCGCTCT
   GATGTCGTA AAAATCCGCATTGCGCGTTTCCGCGCCCAATTGTTCCGGCATGACCGCGC
   GTACCACAATCCGCGCATGCGTTGCTTTTGGAACAACTGGCCGCTCTGAACCTTTGCTGAA
   CACGCGGGCGATTTCAAACACGCACACGCGGTTTGTGTCGGTTAGATTGTTTTCAG
30  AATTTCCACCAAGCCGCGATGAGCGTGAACGCATACCGGCATCTGCGCGCGCAGCGG
   GTTTTGAGCGCGGATGGGTCGCGGTTGGCGGCAAAATCTGTTCCACTGCTGCTCAAC
   GAAGGCATAGCTGACCACTTCGCGGTAAACCGCGAGCCGCCATTTCGTTGTAACGCGCAA
   ACGCGGGCGGCGTGTTCGCGCAGTTCAGCATTTTCAGACGCGCTGACGCTGAATCGTC
   GGGGATGTTTTCATAGCCGTAAACGCGTCCGATTTCTTCAATCAATCAGGCTCAATTT
35  GATGTCAAAACGGAAGCTCGGCGCGGTAAACGCGGAAGCCTTCCGCGCTTTTCTCGGGCTG
   CAGCGCCCAAGTGTGCAAAATGGTTTCCACTGTTCGCGCAGGAATGTCACGCGCAACAC
   GGTTTTTCAGACGCTCAAAACGCAATCAACCTGCTTCGCTTCAGGCAATTTCGCTTTCGCG
   TTCACCATCTCGCTGCGCACCAACCGCAATTCGCAACCAATTCGGTAGCAGGTTTC
   AATGGCATCCGCGTGAACACGTAATCCACGCGCGCTCGAAGCGGAACGACGCAATTCGA
40  ACCGAACCGTATTGGCGGATTTGCGCGGATTTGCGCGGATGATTTTCGGGCGCAACCAAGC
   CAGTATGATTTTTCGCGTCCGCTCTGAACCGCGCTTCGCGCGCGCGCCATTAAAGCCG
   CAACTCAACACGCGTTTTCGTCGCGCACGACGAGCGTGTTTTCAGACAGGCAACCGG
   TTTCTCGTTACGCGATTTCAGCGTTTCCCTTCGCGCGCGCGCGGATGTCAGGCTGCC
   GGAAGTTTGTGCGCATCAAAACGTCGATCGGCTGACCGATTTCAGCATCATATAATTT
45  GCGGATGTCACACAGCGCGGAAATCTGCGGATGCGCTGCGCTCCAAACGTTGTTTCAT
   CCAATCCGCGGTAGTAGCGCGCGGTTACGTTTTCATACACAGCGTGATTAACCGCGG
   GCAATCCGCGAGCGCGGTTAATCTGCACGGGCTGTTTCGACTGCCGTGATCGCGCGGT
   ATGGATTTCGGGCTGCCGTAACGCGCACCCCGTCAATCGGACACTTCGCGCGCAATGCC
   TTTGATGCTCAAGCAGTTCGCGCGGTAGGCGTAATTTCAACGTAAACAGCGTATGCTC
50  CAAATCCAAGTATTTCGCGGATTTGTTACCGACGGGCGCATTTCAAGCAGAAATGTGACG
   GCGGTTTCACACCGTTCGCGGACGCGGATTCGTCGGTGGAAACAAACATCCCGTCCGA
   CACCTCGCGCGCATTTTGGTCGGCTTGATTTGAAATTACCGCGCAACCGCACCGG
   CAGCGAACACGCGCACTTTGATGCCGCTTTCACATTTCGCGCACCGCACCAATCTGCAC

```

CAACCCGCCGTACCCGCATCAACTCGGGTAACGTTCAAACGGTCTGCATCCGGATGTTT
 TTCAACCGATTTCACTTCGGCAATCAGCACGCCCGCAACCGAGCGCGGAGTTTCAGC
 CTCTTCGCATTCGAAGCCGACATCGTTAACAGATGTTCCAGCTTATCGGAGGAAGTTTC
 GGTATCGGCTTGGGTTTTTCAGCCATGAGTAGGAGAATTCGATGGTTAAATTTCTCATATAT
 5 TTTAAGTTTATCAATAATACAATAACCTGGATGCCAAAACCTGATTCAGTCTCAGGTA
 ATTATTTTATTTTCTCAATCGATGTTGGTAAATAACGGAAATGATTTCACAAAGCTGT
 CAATCAAACTGTGCAATGCAGCATGCAATAGCAAGAGTTCCACTTCCTAAATGTGTATC
 TAAAATCTTATCACCCTGCTTGCATACATTTTAAACAACCACTGATATAATTCGACTGG
 TTTTGTGTGGGTGAGTTTATTACGATTTTCCCGACACTAAACCGGAAAATTTTGA
 10 TGGCCTATCGAATGACGACCAAGCCATTTCGCCCATAGAAAATATTATTAATGTCTCTGG
 TTGATTCCTATCCCAAATAATAAATCCTTTATTAATTACCTTCTCAACCATAACTCGCC
 AAAATAATTCACCCCAATAAATTTGATTTTTTGACACGGAAATAATTCATTAAAGTA
 AGTTTGGTCTCGGCTTAATATCCCAATGTGAGTATTCATTATTAATGAATTTATAATCACC
 ACCACGTTTAGTTTATTCAAAAATCCCAATAGGAGGATCTCAAAATGGCAAATCAAAATA
 15 CTTGTCAAGGATACCGAGACATTAAGATCATGTTATCTTCAATTTGAAATAGTTATCATGTGA
 CTATACGCTTCCATTGTGGTGTACTTGCAAACCTGTTGCATAGTCAAAATGGAAAATTTCT
 GAATCAATATCTTTTCAAGATTTTATAATAAATTCATCAAAATACCGATATCAATC
 TCTGGAATACCTGGAGCGATTAAATCAACAATATATATAAAATTCAGAAATGATTTGCGCA
 CGAATAATACAATTTGGGCAATACGAATATCGGATAATACGGCAGGAGACATTAACGTGGT
 20 GTGCAACAATGTGTAATGGCCCTTAATTTATTTTATGATCTTCAACTCTCCCTGAA
 TTAATACCTGATAACTTATTTTAGTTGATTTTGCCTCCACTGCAAAATTTTCTCTTTTTCG
 GTAATATATAAGCACTCTAAAATCCGTATTACCTGGTCCACCAATTTTTTAGTCTCTACCA
 TTTATAAACAATATTGAACCCCATTTCTAGAACATCTTCAAAATAGATATGCCTCTGTGCTG
 TATTTATATCTGCATATTTGTTCAATCAACCTAGGTAGTGAATTAATTCATATGCTGCTGT
 25 TCATCCTTAAGCTCACCAATTTCTCCAATAACTCTTTTGGATAGAAGCTATAAAATTTCC
 TTAATGACATCAATTTTCAAAAGATCACTATCGTTCAGATTTAATGGCATTTCTCGAAAAC
 GAAAGACACTTTGCAATTTTTTCAAAAATTCCTGAGTTGCTTAGGAATAGAGTAACTCA
 CTTGATGTTACTTTACGATATGTTTCGGTCTTACCATGCTTTAGACGGCAAAATTAATTTTA
 CCATCTGTTTTTTGCAAAACACCTGCATCAGTCAATGTTTTGAAAATAGAGATTCCCA
 30 TCATGTGCTGCATTACATAAGCATGACTACGACTATTTTCCGACGTTAATGTGATGTTTA
 ATTTTACTTTCAACATGTTCTGTAACCAAAAATGTCTGTACTAATTTTTCATAGCTTA
 TTTCTGATCAGCAGATTTCACAAATGAAATTAATAGATATATTCATAAGAAAATAGTTTA
 CAATCCAATCTTTCATCAGATAACAACCTTAAATATTAGTCTCATGGGATATAATTTGAATA
 35 ATTTTTCATAGTCTTAATGTACGGATGAGGAAATGGTATCGCCCAACAATAGATTAAGAAA
 ATTTTTTGAATATATTCATTATATCCAAAGTGTTCAAAATAAATTAACCAATGGACGTG
 AACAGGAATTTCTGTGAACCTGCCACACACATCACGATAACCAACATATAAGATGAT
 AATTCCTTTATTTATGAGTAGTAGCATCAATGATTACCTGTATTTTCGTCTATGGGTAT
 AAATCTAGTTTTTCCAAATTTTCAGATAACTTAGCTTTATCTCTACAGATATAAGAGAA
 TTTGTTTTCAAAATACCTGCAAAATTTACATAAATATGAAAATTTCTGTAATGTTTATCT
 40 ATTACCCAGCGCGAGTTGTGCTATCTATTTTCCATTCTCTCTCAATTTTAAATTA
 ACAATGGAGGAATAGATTCAACATACATTGCCGAATTAATAATTTCTGATGATCTGTCGG
 GAATATTCCAATCAATAGGTAATGATGTTAAAGCAATTAACCTCAATGGTGTAAACACT
 TTGCATCTGAATATGTTCCATCAGGCATAGACGCTCCAGGATGAACATTTAATTTGTGAAC
 45 TGATAGCGCTATTACGAATAGTAATAGTTGGGGCAGGAGCATCCCACTTCATACGGCGAT
 AAGTTGATTAATAACTTTTAATTTTTTACCATTTTTTTCTTGGATAATGTTCTATAT
 TATCAAAAGCAGATCGTCTCTGTGGCGTATTTTTTAGCCATATAATGTGCTCCGGAGCAT
 GTGTACGTGCAAAATGCCATTTACATTAGACTTTTGTCCAGACTCAATAGTAGGCAAAA
 AACTAATAGCATACGAACAGAAATGGTTTTGTAACTTTTCCGGCAATCCCAAAATAG
 TTTGAATGTTTTTATACAGCAATATAGCTCGTTTACGATGTGTGCAACACCATCAATCGG
 50 CAGAAATCAAAATATGAGTTTGAATATAATATCGCAACCAATTAATCTTGCAAAATTA
 CTTCTACTGTTTGAATGTCCCTTATAAGCTAACTTAATTTTTTAAAAAATAGCAACT
 TTTCAATCAAAACAAAAGTTGGCGTTTTTAAATAAATAAATTCGATTACTCTGAATATTA
 AATGATTACGTTTATCATTAGCCATCTCTTGAATGTATGAGATTTTTCCCTGCAACACTCA
 TGGCTTGACAAGGAGGAGAAGCAATTAATAAATCAATATCGGATTCGCAACGCTCTGTATTA
 55 AATTTTGAACACTTCTCATGAAGTATACCACTAATAATCATTTTACTTTTCGGGATATA
 GAGCTTTATATAAATAGCAGCTCTGGCAACCAATTCATTTCGAGCTATAATCTTAAATAC
 CCGCATTTATGCAAGTAGGTTTCTGCAATCCCTGCACTCGAAAACAAAGAGCCCTATCA

TCATAGAACCAACCCAAATTAACCTATATATCTCTACAAAGCAATAAAATATGCGCTCTT
 TAAACAAAATTAGGAATGTAATTTACAACAAAATATCAAATTTATATCTTACATATT
 GAATTTTCCCTAAGCAGCGCTGAAACCAAGAGTAGGCTGCTTTTCCATATTACGGCAGTCT
 GCACCATGATTTTCGCAAACTGCTCAAAAAGTTCAAATCATTTACGAAGAACAGCGCGCAAT
 5 TCGCTTACAGTTGTAAOGCAGCATAGCGAAGCGGTGAGACCAATACCAAGGGCGAAACG
 GGTATATTTTTCAGGGTCGATATTGACGTTTTTCAACACGTTAGGATGTACCATACCGCA
 ACCGCTACTTCCAGCCATTTCGCGTTTTCGCCCATAAATGTCGATTTCCGCAACGCGTTC
 GGTGAACGGGAAGAAAGACGGCGGAAACGTACTTGCAAATCATCGCGTTTCAAGAAGAT
 ACGGATAAAAATCCGTGAACACTGCTTTTAAGTCGGCAAAAGTTACGCCCTCTTCAACCA
 10 CAAACCTTTCGCGCTGATGGAACATAGCGAGTGGCTGGCATCGCTGTCCACACGGTAAC
 CGCGCGGGGGCGGATAATGCGGATGGCGGCTCTTTTATTCGAGCATATAGCGGATTTG
 AATCGGGGAAGTGTGCGTAGCAAAAACATCGCGGTTTCAACGTAAAAAGTATCTCGCAT
 CGCAGCGGCGAGGATGGTTTCAGGGAATGTTACGGGCTGGAAATTTGTGAATACTGCTCTTC
 GATTTACAGGCCGTCCGCCACTTCGAACCCATTCGCTGAAGAGTTTCGACCAACAGCTTG
 15 CAAGGTCAGGTTTACGGGATGCAAGGCTGCCGCTTCTCGAGCGCGTCCGGCGAGGGTAAT
 ATCGAGGGCTTCGGCGGCAAGTCGGGCTTCGAGCTTGACTTCGTTGAGGGCTTCGCGTTT
 GGCACTTAAAGCCGCTGCAAAACCGGTTTTTGCACTTCAATGATATCGCACCTATGGTTTT
 CGCTCTTTCAGGCGACATTTGCCCAAAGTTTTAGAAAGTCCGCTCACTCGCGCGTTTT
 ACCAAGATTAACGGGCTTGATTTGTTCTAGAGCGTTGAAGCTTCGCGCAGCTCTACTGCG
 20 GCAATGCCITCTGCAACGATGCGGTTTACATTTTCCATAATATCAAGTCTGTCGAATTA
 TGATATACCACTGAAACAAACGAGGCGCGCTGTATAGCTTGACATATCAGACTCTTCAGA
 CGACCTTATTTTCTCACGCTCAATCCATTTGGATAAATTTCTGTATAGTGGATTAATTT
 TAAACGAGTACGGCGTTGCCCTGCCCTGCGGTACTATCTGTACTGCTGCGCGTTTCGTCG
 25 CCTGTGCTGATTTAAATTTAATCCACTATATTTTAAACGCAAAATTTATTTAAAAAATAG
 ACTTTAAAGAAAGAAATCAATCACATAGAATTTTCGCAAAACAAAGAAAAGGAAGCGC
 CAGCTTCTCTTCAATTTTGGATTAAAGCAGCAAGCAGCTTTGGCTTTTCAACCAAT
 TTGTGCAAAAGCGGCTTTATCGAACCGGCCAAATCAGCCAAATCTTTGCGGTGCACTTC
 AATAGAGGCGCGTTTCAGACCGTTCAATAATTTGCTGTAAAGACAACCGGTTTTACGCGGT
 ACCTGCATTTGATACGGACATCCCAATTTGACGGAAATGGCGTTTGGCTTGGGTAAAGCGGCTC
 30 ACGGTACGCGGATTTAGCCGCGCTTCATTACCGCTGCTTGGCAACGCGGTAAACGTTTTT
 ACGACGCGCGCGGTAGCTTTGGCTAACGCGAAGATTTTTTGGTGCAGCGGACGAGCGGT
 AACACCGCGTTTTTACGCGTGGCATATTTCTAAACTCCTTAAAGCTAGGGTAACATTTAGC
 AACGAAGCCAAATCGCGATCATTTACCATAGAGGTACCGCGCAGTTGGCGTTTGTTTTTT
 GGTGGTCTTTTTAGTCAAGATGTGGGTTTGAACGATGAGCGCGTTTTCACACGCGCGTT
 35 ACCGAGTACTTTAAAGCGTTTTTTCGCGCTAGACTTGGTTTTTCAATTTTAGGCATGGGAAA
 ACTCCATTCGTTATCGGATAAGGCATTAGGGGGTTTTAAACATCGGTTTCAAACTTG
 AACCACAATGACACGGTTTTTTCGCCCAATGAAACTTACTCCGAAGCGCAATCCGGA
 GTAAGCGGAATATAGCTTTATTTTTTCTTCGCGCAATCATCATCACTTATGGCA
 CTTTCCATTTTGGGAAGGACTCGATTTGCGCCACTTCAGCCAAATCTTCTTTTACAGCT
 40 TCCAAAAGTTTTCGCGCGAGTTGCTGGTGAGCCATTTACGCGCGCGGAACCGCATGTC
 ACTTTGACTTTATCGCGCTCGGCAAGGAAGCGGTTAATGTTGGCGCATCTTGATTTGATAA
 TCGCCCTCATCGTACCCGGACGGAATTTGATTTCTTGATTTGACACCTGCTTTTGGTT
 TTTCTTGGCTTCGTCGCGTTTCTTGGCGTCTGGTATTTGATTTACCGTAATCCATCAGT
 TTTGCACACAGGCGGTTTAGCAGTTGGGGAAATCTTACCAAAATGAGCATCTTGCCTCTTC
 45 GGCCATAGCCAAAGCTTCACGAATGAAACGACACCAAGCTTTCGCTGACTCATCGAT
 TAAACGCACTTCTTGGCGGTAATTTTCGCGCTTGATTTCTGCTTTCGCGTCTTTCGAGCGAT
 GATGAATACTCCTAIAAAAATTAATGATTAGCAGGGCATCAGTGATTTCTTGGTGCAT
 TGGCCAATGAAATCATCAAAATCCAAAGAACCCAAATCTTCTGCTTTGCGCGCTTACCCG
 ACTTTGTTTCTGCTCTCTCTTATCGCGCAACAGATTTGATAAGGGAAACGGTATGG
 50 CTGTTGTGCGGGATTTGTAAACGATTTTTTTCGTTACGCAATCCCACTCGGCGCGGAAT
 CTTCCGCGCTGCAATTTGGCAGCACTTCCGACATAATCTGCTGATTTTCGTAATA
 TTTCAATATTAACAAATTGAACCGGAGCAACCATACCGGGAATGAGCCTGCATGGTTCTCA
 ATTCGAATCGCATAAACCGCTTCCAAAGAACCTAAAATGGCGCGATGCAACATACACAGGA
 CGCGCAGCGTGGTTGTTTTCAGTTACATATTCGGCATTCAAACGCTTCGCGCAATACAGAA
 55 TCCAGTTGTAATGTACCGCATTGCCGAAGACGACCAAGGCATCTCTGACATGATATTCG
 ATTTTAGGCGCGTAAAACGCAACCTTCGCGCGCAATTCGCCCATTCGACGCGCAGGCA
 GTCAATGCTTCGCGCAACCTGCTCTGCTTATCCACACGTCATCTGAACTTCGCGGT

TTTTCAGGGCGAAGAGAAAGCTTGACGGATACATCATGGAACCGAACTGTTGTAGATG
 CGAATCAACAATTCATTGAACGCGACGAGCTCGCTGACGATTTGATCTTCGGTACAGAAA
 ATATGCGGCATCATCTGCACAAAACCGCGAACCCGCGATCAGACCGTGCAGCGCACCCGCTC
 GGCCTCATTTGCGGTGGCAAGAACCGAATTCGCGCAACCGCATCGGCAATTCCTCGATACGAA
 5 CGCAAAACCGTTGTTAAAAAATTTGAACATGACCCGACAGTTTCATCGGTTTAAACCGCATAT
 TCGCGTTTTTCGGAACCTGGTTACGAACATATATCTTTGTAGTTGTCCCAATGGCGCGAT
 TTTTCCCAAAAGGTTTTATCCATGATTTGAGGCGTTTTGACCTCTTTATAACCGCGGGG
 TTCAGCTCTTTACGCGATATGCTGTTCAATCACTTGCCACAAAGCCAGCCTTTAGGATCG
 CAAAACACCATGCGCGCGCTTCGCTTCGAGGTGGAACAGATCCAATTGCTTGCCAAAT
 10 TTGCGGTGGTCGCGCTTTTCGCTCTTCGATACGTTGAATATAGGCTTTTAATTCGCTCT
 TTTGTCGCCCCAAGCCGTACCGTATATGCGTTGACGACATTCATTATTTGCTGTGCGCCGCG
 CGATATGCGCCCCCAACTTGGTCAGTTTGAAGTTTTTCAGGAACCGGATATTCGGAACG
 TCGCGGCGCGGCGACATATCGACATATTCCTGGTGATGATACATCCCATCGCTTCCACT
 TCGGGCATATCGTCAATCAGGCGCAGTTTGATTTCTTCGCGCGCTCTTGAAAAATTTTA
 15 ATCGCTCCGCGACGCGGAGTCATGATTTGACCACATCATAGTCTTGGGCAATCAATTCCT
 TTCATACGCGCTTCAATGCGCGCAACATCTTCGCGGTAAACCGTTTTTCGTTGCGCGATG
 TCGTAATAAAAGCCCTCTTCAATGACGGGCGGATAACCATTTTTGCATTAGGATAGAT
 TGTCTTGACGGCATGCCCCACAAGATGCGCGAGGAATGGCGGATGATTTGCATGCTTCC
 TGATCTTTGCGAGTAATGATTTGAACAGCAGAATCTTCAACAATCGGGTCGACCGCATG
 20 ACCAATTTGCGCTTTACCTGCTGCCACCGCTCGCCTTCGCCAACCGCACCGCATAGAC
 GCAGCAATTTGAGCCACCGTAAACGGGGATTCGATTGCGGACCTGAGCCGTCCGCGCAG
 GTAATATTTCAACATCAACGCTCCGGAAGATAAAAAATACCGCATAAATGCGCGTTATG
 GAAATTTGGTAGGCAGGATTGGATTGCAACCAACGACCCCATGTCAGAGTGGCTGCT
 CTAACCAACTGAGCTACGTGCTTCAAGAATTTTGCATTTTATCGGGTCGTTTTAAT
 25 TTTGCAAGAGGTATGTGCGTTTC

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 286>:

gum_286

GCACCTTCAGACGGCATTTTATGCCTTGCCCTCCATGCCGTGATGTTTCGATGGCAAAACCG
 30 CTTCGGCGGTAGGCGGTAAGCGTTTCGCGCGCGTCGCGAGCTCTTCCAAGCTTTGGCGG
 ACGATTTCCAAAACGCGCGCGGCAAGACCGGAGCGGTTCCTCAAAAACCTCGGACAGG
 TTCAAAACCGTCATGCTTCGGGAATTCGGGCGAGATTGCGCGCGCAGCAAGCAGGACG
 CATGGTTTCAGACGGCATGGCTTCTCCGTTTCCCAAATTCGTCGGGAATGAACCTCTCG
 35 GCCTCGTATTGCAAAGCATTTTGTCCAATTTCGAAGCTGCCGCAAGCATTCGACACAC
 ACCAGATTCCTGCCCGCTCCCGAATGCGACGGGCAATCAGGCGCGAGGTGAATTCGGA
 ACTTTGGGCAACGTGCGGTGAARAGGTGGCTTCGGCATATTTGTTGAACATTTGCGCAGGA
 TAATGCCGCTCTGAAAGGCTTCAGACGGCATTTGTTGGGAAATTAAGATTTCGCGAGATAGT
 TCAGCAGCAAGGGAAACGGGACGGCGCGTCGCACTTTTTCGCGCACCGGATTTCCACGCG
 TACCCGCGATGTCAAGGTGTGCCCATGGATAGTCTTCGTAAGTAGGATAGGAATGTTG
 40 CGGCGGTAACTGTCGCCCGCGCGGCGGTGCGGATGTTTGGAAATGTCGCGCAAGTTGGATT
 TGAGTTGGTCTTTAGGTCTCAAAGAGCGGCGATTGCCATGCTTTTGTGCTGCAAGGTTGT
 AGGAAGCGCGCAAGCAGGCTGTGCGATCAAACTCAGTATTGTGCCATCAGCGCGCTGACAT
 CGTGCCTCCCAAGGCAACAATACACGCGCGGTCAGGTTGGCGAGTCGATGACGCGTTTGG
 45 GTTTGAACCTGCTCGCGCTAAGTGAGCGCGTCGCAAAAATCAGACGGCTTCGGCATCGG
 TGTTCAACACTTCGATGTCAGCGCTTTCATACCTTTTCAGGACATCGCCGCGTTTGTGTTG
 CGCGCGCGGAAGGCATATTTTCAAGTTGGCGACGAGGCAATCAGGTTAATCGGCAGTT
 GCACCTTTGACGCGCGCGCAGAAGTGCTGATGACGTTGCGCGCTCCGACATATCAAACT
 TCATTTGCTCCATGTTTCAGGCGCGGCTTGAGGAGATGCGCGCGGTGTCGAAGGTAATGC
 50 CTTTGGCGACCAATACCAAGGCGCGGCTCTTTTGTGCGCTGCACCGAAATAGCTCAGTT
 CCACCAATAGGGGCTTCGCGCTGCTTTTGGCGACGACCAAAACGAACCATATGTTTT
 CTCTGATGTACTCTTTTTCGATGATTTTGGCGTGCAGCGCGGCTTTTCGGCTTCGGCTT
 TGGCGGTGCGCGCTAAAAATTCGGCGGTGCATTCGTGGGCGCGCGGTTCGCCAGTGC
 GCGAGAGGCTTTGCTCCGTAACCTTGCCTTCGCGACGCGCAAGGCTCTTTGACGCGG

CTCCTGCGCGGTATGGAACACGGCAGTTTCAAATTTGGCGGGCTTGGCTTCTTTTTGT
 AGCGGTGGAACGGTAGGCGGCATTGCCGAACGAATCGCAACGCTTCGGCAACGGCTG
 GACCGTCGCGTCTTCAAAGACGTGAACGTCACATTGACCGTTTCTGATTTCGGCC
 5 ATTTGGCGGCTTCGGCGGCGGCTTGTTC AATGCGGCGCGGCGGCTGCTTTTCAGACAGC
 ATACGGCAACAGCCTGCAAAACGTTGCCCTGTCGGGATTTTGTGTCGGCAAAATTTGAC
 CTTCTTCAAGCGAAGCAAAAGGGCAAGGACGGTCGGGTTGCTCAGTTGCGATGCTTCGG
 TGCAGACAATAAAGCTGTCGCCCTGCCCTGCTGTTCTCTGCAAGATTTCGGTTTTCGTCTAA
 ATGTCACGTTTATCTCTCTGATTGAGACGGTTGTCGGTAGTTTTCGAGCGGCTTTTCGCT
 10 CAAAAGACCGCTGTAAGACGGCTGGCAGATTGTACCCCAATTGAAGACCGCTCTGAAAC
 CTTGCGCGGACAATCCGCTGCGCCGAACCGCTTACGCCCGGCTGACCGGATTCATG
 ATTTATCAAGAAACCTCATCAAGAACTCTCTTTTACCGCGCTCGGCATTTTCGTGCTC
 CTCCTGGCGGATTGGTCTCCACGCAAGCAATCAACCTGCTCGGCGTGC CGCGACGG
 CGTGTGCCCATCGATCCGTGTTGGCATTGGTCGGCTTCTGGGTCATCGGTATGACCGC
 CTTTGTGCTGGTGTGACCGCATTTATCAGTACGTTGACCGGTTGACCGCTACTGGCG
 15 GACAGCGAAATGTCGCTCTGGCTATCCTGCGGATTGGCATTGAAACAATGGATACGCCG
 GTGATTGCAGTTTGGCGTGCCGTTTGGCGTTTGGTTGCCGTCATGCACTTTGGGTGATA
 CGGTGGGCAAGCTACGAGCGCGAATACGCTGAAATCCTGAAGCAGAAGCAGGAATTG
 TCTTTGGTGGAGGCAAGCGAGTTCAACAGTTTGGGCAAGCGCAACGGCAGGTTATTTT
 GTGCAAACTTCGATACCGAATCCGGCATCATGAAAACTCTTCTGCGCGCAAGGAC
 20 AAAAAAGGCGCGCAACATCATCTTTCGCCAAAGAGGTAACTTCTCGCTGAACGACAA
 AAGCGACGCTCGAATTGCGCCACGGCTACCGTTACAGCGGCAGCGCCGGACGCGCGAC
 TACAATCAGGTTTCTTCAA AAACTCAACCTGATTATCAGCACCGCCCAACTCATC
 GACCCGCTTTCACCGCGGTACCATTCGACCGCCCACTGATTGGCAGCAGCAACCGC
 CAAACATCAGCGGAATTGATGTGGCGCATCTCGTGACCGTCAGCGTCTCCTACTCTGC
 25 CTGCTTCGCGTGCCGCTTCTCTATTTCAACCGCGCAGCGGACATACCTACAATATCTTG
 ATTGCCATCGGTTGTTTTTAATTTACCAAAACGGGCTGACCTGCTTTTGAAGCCGTG
 GAAGACGGCAAAATCCATTTTGGCTCGGACTGCTGCCTATGCAACATTATCATGTTTGGC
 GTTGCACTCATCTGTTGCGCGTCCGCAATGCCCAGCCAGCCCTTCTGGCAGCGGTT
 30 GGC AAAAGCTGACATTGAAAGCGGAAATGAACCTGATTACAGTTACATCATCCGTC
 AAATGGCGGTTATGGCGGTTTACGCGCTCCTTGCTTCTCGCTTTGTACAGCTTTTTTG
 AAATCCTGTACGAAACCGCAACCTCGGCAAGGAGTTACGGCATATGGGAATTCGCG
 GCTACACCGCCCTCAAAATGCCCGCCCGCGCTACGAAC TGATTCCCTCGCGCTCCTTA
 TCGGCGGACTGGTCTCCCTCAGCCAGCTTGGCGCGGCAAGCACTGACCGTCATCAAG
 35 CCAGCGGCATGAGCACCAAAAGCTGCTGTTGATTCTGTCGAGTTTCGGTTTTATTTTG
 CTATTGCCACCGTCGCGCTCGCGGAATGGGTTGCGCCACACTGAGCGCAAAAGCGGAA
 ACATCAAAAGCCGCGCCATCAACGGCAAAATCAGCACCGGCAATACCGGCTTTGGGTGA
 AAGAAAAAACAGCATTATCAATGTGCGGGAATGTTGCCGACCATACGCTTTTGGGCA
 TCAAAATTTGGGCGCGCAACGATAAAAAAGCAATTGGCAGGCGAGTGAAGCCGATTCGG
 CCGTTTTGAACAGCGACGGCAGTTGGCAGTTGAAAAACATCCGCGCAGCACGCTTGGCG
 40 AAGCAAAAGTCAGGTCCTATTGCGGCTGAAGAAACATGGCCGATTTCGCTCAACGCA
 ACCTGTGAGCTATTGCTCGTCAACCGACCAATGTCCGTCGGCGAATGACCACTGACCACT
 ACATCCGCGACCTCAAAACAAACAGCAAAACACCGGAATCTACGCCATCGCATGGTGGC
 GCAAAATTTGGTTTACCCGCGCGAGCTGGGTGATGGCGCTCGTCGCCCTTTGCTTTACCC
 45 CGCAAAACCCCGCCACGCAATATGGGCTTAAACTCTTCGCGGCATCTGTCTCGGAT
 TGCCTTTCACCTTTCGCGACGGCTCTTCGGGTTTACAGCGCAACTCTACGGCATCCCGC
 CTCCTCTCGCGCGCACTACCTACCATAGCCTTGCCTTGCTCGCGCTTTGGGTGATTAC
 GCAACAGGAAAAACGTTGAACCAATGCGGCTCTGAACCTCTTTCAGACGGCATTTGTTT
 50 TCATTGACACATTCACACAGACAGATAGCCGTTCCCTATTACATTACCTGTCAACAGT
 TCCATTTTGGTTAAACTAGTCTATGATAGCGGTACAATATGTTTACATATTTAAGC
 CAAATCATTTGCAACCCGACAAAAGAAAAACAGAAAAAGGACAAAGAGATGTTAGAAGC
 CTATCGTAAAGCCGCCGCGAGCGCGCCCTCGGCATT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 287>:

gnm₂₈₇

CGGCAGTGGACAAGTGACTGTTTCAGTCTTATTTCCAGAACGATGGCTCAGGTGCTTACCG
 TATCGATTGAGATTCATTTTCGATAACGGCAAGTACTGGATGTTGCCACTGTCAAAGAACT
 GGTACAGCAATCCACCGACGGTTCGGACAGATTGATGCCCTACCAATCCGGAAATACCTT
 5 AAATGGCGGATTGGGCGATGACTATCTGTACGGTGCCGACGGGGATGACTGCTGAATGG
 TGATCGCGCAACGACAGTATCTACAGTGGCAATGGCAATGATACGCTCGATTGGAGAGA
 AGGCAACGAGCCCTGTACGGCTATAATGGTAACGATGCACTGAATGGTGGCGAAGGCAA
 TGATCAATTTGAACGGCGAAGACGGTAACGACACTCTAATCGCGGGTGCAGCAATGATTA
 CTTGGAGGGCGGCAGCGGTTCCGATACTTATGTCTTCGGCAAAGGCTTCGGTCAGGATGC
 10 GGTCTATAATTACGACTACGCTACCGGACGCAAGACATCATCCGCTTTACCGACGGTAT
 TACAGCCGATATGCTGACTTTTACCCGAGAGGGCAACCATCTTCTTATCAAGGCAAAAGA
 CGGCAGTGGCAAGTGACTGTTTCAGTCTTATTTCCAGAACGATGGCTCAGGTGCTTACCG
 TATCGATGAGATTCAATTCGATAACGGCAAGTACTGGATGTTGCCACTGTCAAAGAACT
 GGTACAGCAATCCACCGACGGTTCGGACAGATTGATGCCCTACCAATCCGGAATACCTT
 15 AAATGGCGGATTGGGCGATGACTATCTGTACGGTGCCGACGGGGATGACCTGCTGAATGG
 TGATCGAGGCAACGACAGTATCTACAGTGGCAATGGCAATGATACGCTCGATGGAGGAGA
 AGGCAACGAGCCCTGTACGGCTATAATGGTAACGATGCACTGAATGGTGGCGAAGGCAA
 TGATCAATTTGAACGGCGAAGACGGTAACGACACTCTGATCGCGGGTGCAGGCAATGATTA
 CTTGGAGGGCGGCAGCGGTTCCGATACTTATGTCTTCGGCGAAGGCTTCGGTCAGGATAC
 20 GGTCTATAATTACCATGTGGATMAAACTCGACACTATGCACTTTAAAGGATTTAAAGC
 AGCAGATGTTCAATTTATCCGTTCCGGAAGTGATTTGGTGCTTAGCGCTTCTGAACAAGA
 ACAGCTACGTATTTCCGGATTTTCTATGGTGAAGAACCATCGGTAGATACATTTGCTCT
 TGATGATGCACTATCAGTAATCCAGATTTTGCCAAAGTATATTAACTGGCAATTAATTT
 GGTACAGTCTATGTCTGTGTTTCGGTCTAATACTGCTGCGACAGGAGGAATGTGGATGC
 25 CAATATACAATCCGTACAGCAGCGGTTATTTGGTAACGCCATCTGCATTAAGGAGCCTTAAT
 ACATTCATGGCTTAAACTGAAAAACAGCAATCAAGTTTATTTGATTGCTGTTTTCTTTA
 ATATTGGGATAAGGTCGTATTTTAATTAACCTTAATCGGTGCACTCTAGCAATATAGT
 GGATTCACAAAAACAGTACAGCGTTGCTCGCCTACCGTACTATCTGATGCTCTCGCG
 GCTTCGTGCGCTTGTCTGATTTTGTAACTCCACTATAATTTTCAGACGCGCTTTTGCC
 30 TTTTCAAAATCAAACCAATCAAACGGTTTTATTGCTTCATCGCGTTGGTCAAGGCTTTGA
 TGGTGTGGCGGTACATTCGATGTAGGTGTCTGCGGGCGCGTTGCGAGTGCCTCGGAAT
 ACAGTTTTCGCGCTGACGTTGACACCGGTTCTTTGGCGATACGGTCAACCATACGGGTGT
 CCTTGTGTTTTCGGTAAAGACGGCTTTGATGCCCTTCGCGTTTGATTGTCTGATGATGG
 CGGCAGCTTGTTTGGCGAAGGCTCGGCTTCGCTGCTCAGCGCTTGCAGGGCGATGAAT
 35 CGATATGGTAACGTTTGCCCATATAGGAAAAGGCATCGTGCCCGTCAGGACTTTTCGCTT
 TGGCAGCAGGGACGGCATTAAATGCGGCTTGTGCGTCCGCTGCGAGTTTGTGAGCTGCA
 TTTGGTAGTTGCCAAGCGTGTGTTGATAATAAATTTTGCTTCGGGATCGCGCTTTCGA
 GGGCTTTGGCAACGTTTTGGGCATAGGCGGACATAAGGACGGGGTCGTTCCAGACGTCGG
 GGTCAATTCGCGCTGCTCATGGTGGTGTCTTCGTGGTCTATGATCGTGGTCTGTATGGT
 40 GTCCGCTCTTCTTCGCGCTTTGAGGGGTTGGATGCCCTTTGGTCGCTTCGGTATAGGATA
 CTTTGCTTTGTTTGACGGGCGGTTGCACATCGGCAGCTTCAAGTCTTAAGCCGTTGAGCA
 GGACGAGTTTGCACTGCGGATTTTTTAATGTGCCACTGGTCATATGATAGGCGTGGC
 TATCTTGGTTGGCTCCGACCAAACTTTGTATGGATACGCGCTCTCCGCGGATTTGTTGG
 CTACGTCGCCATAAATGCTGAAGCTGGTTACAACGGCAGGGGGGCGAGTTGCGGAG
 45 CGGTCAGCAATGCGGCAATAAGGGTGAGTTGAGGTGTTTCATAACTGTTCTCCTGTGAT
 ATACGCTAACATCTGTTATGGTAAACAGCGCGCTGTTGTTCAAGCGGCTTGCGGGGT
 CAGGTGGTGTGGCGGTGGTGGCTTTTGAGCCATTGGCCAGATGCCCGCTTCTTTGCCG
 AGTATGACGGCAAGACATATCGGACGCTGCACGAGCGGATGAT

50 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 288>:

GNMCS11F gnm₂₈₈

CCGGCACCAACGCTTACGACACCGCCACCTCGAAGTGATGTTTCAGCAATGTTTCAGCC

AGATTGACTATTTGCGCCGCAAGGGACGGGCGCGGCTCCGGTTCGTGGTCAAAGTCG
 CCCACCTGCTCGAACGGCTCCGGCAGACCGTAGACCGTCTGAAGCTGCTCACCAGCATCC
 AAACCGGCGCCGGCAACAGCAACCGCTGACCATCGCGTGTATGAATCCCTCATCTACG
 CGGCGTTCGAACAATACAGCACCCGCCACCTGCGCGCGCGAGCATCCGTATGCTCGCCG
 5 CAGCATTACCGAAAAACAAAAGCCACACACGGCGAACACTACATCACCCGCAACCCGCAAGA
 ATATTTCAAATGTTCTACTCGGCGGACGGGCGGCATCATCATCGCCCTAATGCGCGT
 GCTCAAAATCCGCATCGGCTCACTCGGCTCAGCCCTTCTCACTTCCTTGTGCGCTGG
 GTTCAACTACGGCATCGGCTTTATGATCATCCATATGCTGCACTGCACCGTCGCCACCA
 CGAGCCCGCATGACTGCGCGCACGAGCAATCGGAGTAAAAATGAACCTTGATTAAAC
 10 CGCGCAAAAAGTCCGTCTTCTTGAAGGATATTCTGTGGGGTATGGGAATAATA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 289>:

GNMCS48F gnm_289

TGCTGGCAGCAAGAAATCTGCACGATTGTCAATGGTGTGAAATACTTGTCAAACTCTG
 15 TCGATGCCCTTGTGAGTTATATAAATAGCAAAAACCTCTTTGGCAACCCGATACAT
 CAGAAGGATATACTTCCACGCAGCAGGCATGGCAATATATTTAATAGATATATTAATGC
 CGTTTCTGCAACCATCGCGCAATGGGTTCCTAGAATAGACTTGTGAAAGTTCCGTATCAA
 TTACTTTGCGAAATGTTTCATCCSTTTGATGGCATTTACTTTTTCCATCGTAGTAGTGC
 AAGTT

20

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 290>:

gnm_290

GTCGACTTAGAGGATCCCTGGGATTGAGTTAGACCAGACTGCTCATTATACTTTATG
 CAGGTTTTGTAATATTTGGCAAACTTCATAAATATGCCTTGAATCAAGTCATCAAAAT
 25 AGCATGTAAATACTACTATAGAAATTAATTAACAAAAATATTATGTATTCTTTTGTTGA
 CAAAGGATCCGAGCTCGAATTCTGAATCATGGTCATAGCTGTTTCCTGAGTGAATTTGT
 TATCCGCTCACAATTCACACACATACGAGCCGGAAGCATAAAGTGAAGCCTGGGGT
 GCCTAATGAGTGAAGTCACTACATTAATTCGGTTGGCTCACTGCCCGCTTCCAGTCG
 30 GGAACCTGTCGTGCCAGTGCATTAATGAATCGCGCAACGCGGGGAGAGCGGCTTGG
 CGTATTGGGCGC

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 291>:

GNMCS78F gnm_291

CCGCGCAGGCGGCAATCTATCGGAAATGACTGAAACCTCGAGATTCTAGATTCACACT
 35 TCGTGGGAATGACGGTTCAAGTTGCGTTCCACAACACCGCAATCTCGAAATCCGTCAATC
 CGCGCAGGCGGAAATCCAGACTCCGACGCGCGGCGGAATCTATCGGAAATGACTGAAAC
 CTCGAGATTCTAGATTCACACTTTCGTGGGAATGACGTTTCAGTTGCGTTCCACAACAC
 CGCAATCTCGAAATCCGTCAATCCACACAGGCGGGAATCTAGACTCCTGACGCGCGGG
 AATCTATCGGAAATGACTGAAACCCCGAGATTCTAGATTCCCACTTTCGTGGGAATGAG
 40 GTTCAGTTGCGTTCCGACAACACGTAATCTCGAAATCCGTCAATTCGTACAGCGGGGA
 ATCCAGACTCTGACGCGCGGGACTCTATTGGAAATGACTGAAACCGCGAGATTCTAGA
 TTCGCGGTTTTGGGGAATGGCGGCTCACTTGCAATCCGACAAAT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 292>:

GNMVC37R gnm₂₉₂

TCGGCATTTTTTATCCGTTTTGGGGGTAACCTGTTTGGAAAGCTGCAACTTCATAAATA
 CAGGATTACATTTAAGTTTTGGGTAACTTTTTAAAAAATGCGTGATGACTTTTGCATT
 TTTAAGGCGTTTTTTGGGGTAATTCTGTAAGTAACCCAAAAAGTTACCCCATAAATGG
 CGAAACTCAAGCATACGCCAGCATCTCTGCAACACAAAAAGCCTTGAACCTGTTGAAGT
 TCAAGGCTTTTTTGTGTTGCAGGATCTGCTGTCAATAGGGTATGTTGGAGGCGGGGGTA
 TCGAACCCTCGTCCGATATCTCTCTACAAGCGTTCTACATACTTAGTTGTGCTATATG
 AGAATCTATTTCATCATGCCGACCAACAGCGCTTATGGATACCACTTACCTTAAGTCT
 T

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 293>:

GNMVC44F gnm₂₉₃

GACGCCAGTTTCGCGAAAAACGACGGCCAGTGCCAAAGCTTGCGATGCTGCAGGTGCAGCTCT
 AGAGGATCCCGCGCATGGCTTGTGCGAGTTGGGGCAGGATGGGGCGGTTGCGGTCCGGGT
 TTTGGCTTAAAAATTTGGGTGATGAATTCGGGCACTGGCACGAGATGCGGCGGATTTGCT
 TGGGCACTGCTTTGATTGCAACTGGATTTTTCGCGTATCATGCCGGCACAGGCATT
 CGTGCAGCGCGCGTGCAGGCGGTTGAGGACGGTCAGCGGCACGGTCATGGTCACGCGT
 CTAGCGGATGGTGCAGCTCGAAGCGGTAGGAAAGTTTGAATTTGCCGTCTCGGCTTGCC
 AGAATTTGGGGAACGTCTTCGTAATGTGTGCGGCGCGGTGTTGCATCATGATCG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 294>:

gnm₂₉₄

GCCTCCACCACTGTGAGTCTCCTTGCTGCTGGTGTGTGGCGGCCACTCACCATG
 CATCATGACCGTGGGATCTCAGTAGCCAGCGTGCACGTATTCTGCGCACTTATCAGTGC
 CTTGCTACACTTTGCCCACTTCCACTTCGGCAGTAATCTGCTCGATGCGCTTTTTTCGCCG
 CATCCCGGCTCTTTGAGTGGTTGCGCAATGTAATCGTACCGTCTTCGGCAATATTGA
 TTTCCGTACCGGTTTACGCGGTAATCGAACGGATGGTTTACCGCCCTTACCGATAACTT
 CGCGGATTTTGTCTTGGTTGATTTTCATCGTGAACAAAGCTGGCGCGTGTGCGGACAGCT
 CTTGCGGGCCGCAACGGCGGCTTTCATCTGATCCAAGATGTGCAGACGCGCTTTTGGG
 CCTGTGCCAAAGCAGATTGCATAATTTCTTTGGTAATGCCTTGGATTTTGATGTCATT
 GCAGCGCGGTAAACGCTTCGGTCTGACGGCCACTTAAAGTCCATATCGGCCAAGTGGT
 TCTCGTCGCCCAAAATGTCGGTCAGGACGGCAAAATTTGTGCTTCCAGAAATCAGACCA
 TCGCGATACCGGCAACGTGTGCTTCAAGAGCACCGCGCAGACAGAGGCTCAGGCAGC
 CGCGCAGACGGAAGCCATAGAGGAAGAGCGGTTGGATTCCGGTAATTTCCGAGACCAACGC
 GCATGGTGTAGCTGAATCTTCAGGTTTCGGCAATACGGCCAAACATGCAGCTTTAGCCA
 AACGGCGTGACCGATTTCACGGGCTTCGGTGCGCCCATGCGGCCCACTTCGCGGGTAG
 AGTACGGCGGAAAGTTGTAGTGCAGCATAAAGCGGTGCGGTGATTCGCGGACAGCGGCT
 CGATGATTTGCTCGTCGCGCGAATACCCAAAGTTGCAACGGCCAAAGCTTGGTTTCGC
 CACGGGTAAACAATGCAGAACCGTGCCTGCGCGGCAATACGCTGGTTTGGATTTGCAGCG
 GACGACCGGTGCGGGTGTGCGGGCGCTGATGCGCGGTTGGCCATCCAAATTTGGCTGT
 GTAGCGACATCGGCTTCCAAGTGTTTGAAATGCCCTTTGATTTCGTTGGCTGCCAAAGTGT
 CGGTTCTTCGGAATCAAGGCTTCTTTACCGCACTCCAAGCTTCGTCCAATTTGGCAG
 AACCGCTTGTTTTGAAGGATTTTGAACGCTTCTTTAAGGTTTCGCGGCAATCCCGC
 GGACTTTGGCAACCACTTCTCATTTGGTTTCAGGTGCTTTCCAATCCCAAAGTTCCGGAT
 TGACTTCGTCGGCAATTCATTGATTGCAATGATGGCAACCTGCATTTGATCTGGGCGCT
 AAACACCGCGGCCAGCATCACGCTTTCGGGAGGATTTGGCTTCGGATTCCACCATCA
 ACACGGCTTTGAAGTACCGGCGACCAAGTCCAATTCGCAATTTCCGCAATTCGGCTT
 TAGTCGGATTCAAACGTACACGCGCTTTACATAACCGACGCGTGCAGCGCGCATGCGG
 CGGCAACCGTACGCGCTCAACACGACGCGGCGAGATGCACCAACATTCAGGAATAT

CAGAACTCGATTTCAGGATCGACGGACACGACCATCGTACGATTGGATGTCTGGTGTAGA
 AACCTTCAGGGAACAGCGGACGGAATCGGACGGTCGATCAGACGGCTGGTCAGGATTTCCTT
 TTTTCGCTTTGTTTGCCTTCGCGTTTGAAAGAAACGCGGGGAATTTTGCTCGCGGCTTAAG
 TGGGTTCCAAATAATCGACGGTCAGGGGGAAGAGCTTGACCTTCTTTCACTTCTTTGT
 5 TGGTGGTAAACGGCAACCAAAACCAACGGTGTCCGACATAGAGACTTTAACGGCAGCGCGCG
 CTTGCGCGGCAATTCGCGGTTTCCAAAGTAACGGTCTGATTACCGTATTGGAAGGCTA
 TAACTGTTTGTGCAACATCATTGTCTTTCAAATAACCGCACTGCTAAACACCTAATA
 ATGCACTCTAAATCCGAATGTGCATAGTTAGGTTTTCAGACCGTGCAGGATTTATAAA
 CAAAGCTTTCAGACGGCAATTCGACGCTGAAAGCAATTCGGGATTATAAAGCAACCATCA
 10 CTTAAATCCAGTATTGATACAAATAAAAGGCCGTGTAAGCAATATTTCTTTCAGACGGC
 CTTCAAACCTTAAAAATCAATCCTGAGTCAGCAAAAGTCAATGCTTCCGATACTTCTCGAC
 AGTTTTCTGAATCACATCGCGAGGCATTTTCGGCGCAGGGGCTTTTGTTCCAACCGCT
 TGTGTCAGCGAGTCGCGAACGAATTTGTTGTCAAAGACGGCGGATGTTGCGCGACTTT
 GTATTGTCGCGAGGCAAAACGGCTCGAATCGGAGTCAATACCTCATCCATCAGCGT
 15 CAGCGTACCGTTTTTCATCCAAACCGAATTCAAATTTGGTATCGCAATAATAAACCGCG
 CGATTGGCATATTCGCGGCTTCGGTGTAAAGCCGAACCGCTTTGGCGCGCACTTCTTC
 CGCCAAATCTTTGCGGATAATGCGTCCGCAATCTTCAAAGCTGATGTTTTCATCGTGATC
 GCGGACTGCGGCTTTGGTTGAGGCGTAAATACTCACTCAGGCAAGTTTGGCGCTTCGTC
 CATGCTTTCAGGCAAGTGAATACCGCAAAACGAGCGGTTTTTGTATAATCTTTCCAACC
 20 GCTCGCTGCGCAGATAACACGCACTGCTGCTTACTTTACCGCGAGTGAGCTTTTAGC
 CAGGACGGCGGCTTCTCTAAAGCTTTGCTTCGTTTTTCAGGCAAAACATCGTAACCGT
 TTAGCCGGTAAAGTGTGGGCATAATATGCCGCAAGTTTTTAAACAAAAATTTGAAAT
 TCGCTGCAAACTCTCCCTTTGTCGGAATCGGGCTCGCAAAATCACATCAAAACCGGCA
 CAGGCGGTCGGAAGCGACCATCAGCATACGTTTATCGTCGATTTTCATATAAATCGCGCAC
 25 TTTTCCAAAAATAGATCTTTACCAAAACCAATCTCACTCATTTTCGCCCCCTTCGAAATAT
 CTTGAAATATACCGCACCGGACCCGACAGGTTTGAATCACAAAACCGATATTTAGCGGAA
 TCGCGGCAAAAAACATAACCATGCGCAAAAAAGCCAAACCGTCAACCGTCGCGCAAAATTT
 TGGCACTATAATACCGACGCAAGTCTCAATACACTTTTACCAAGGAAATACCTCAT
 GAGAACTCTATTGACAGGCTCGAAAGCCAACTGGCAGCTGCTGCGCGAGCGCTCTCC
 30 GGAAGACTGGGAAACCATTCGCGAGGATTCGCAATCCCTAGACATTACCGATGCGGATGAC
 GCTCTGCAACATGGTCAAAGTTTCAACCCGACGCCATTTGTCAACMGCGCTGCTATAC
 TGCGGTCGCAAGGCGGAAGCGATGCGCGCAGCGGCAATTTGCGCTCAATGCTTCGCGCT
 TTACAACTTGCCTTGGCAGCACATCGCGCCCATCGCCGATTTCATCCATCTCAACCGA
 35 CTATGCTTTGACGGTAAAGGGAAGAGCCCTATCAGGAAAGCGACTTTACCAATCTTCC
 CAATGATACGGCAATCCAAAACCGCAGCGAGCTGCTCGCACTGTCTGCCAATCCGCA
 CAGCCTTATCTCGGCACTTTTGGCTGTTTAGCGAATACGGGACAACCTTTATCTCGCAC
 GATGCTGAACCTTTCGCGGGGAACGTTCCCGCTGTCGCGCGTCCCAACCAAACTTCGGTGT
 CCCGACCTATGCGGCGACTTGTGCGCACCATCATCGCGCTGTTGACGACTTCAATCC
 40 CGTTTCGCGGCAATTTACCACTACGCGCGGACGAAATCCGATCTCTGGTAGAATTTGCCCA
 ACATATTTTCCAAAGCGGCATCGCAACAGCAGACATCTTCCCGCTTCCGCAATGACTCG
 CGTTTCAGCAAGGAATATCCGACCGCGCGCCCGCAGGCGCGCATACAGCATTTTGAGCTG
 CCGCAAAATCGAAAACGACTTCGCGATCAAACGCTCAGACTGGCAAAAGCCCCTGCACA
 45 GGTGCTTTCAAGCTGCTGATGCGCGCCCGCCCTCTGTTTCCGCGCTCAAGCAGCGCT
 TTGGCGGTTTTCTATATAGTGGATTAACAAAAACGAGTACGGCGTTGCTCTGCTTGGC
 GTACTATTTGTACTGTCTCGGCTTCTGCTGCTTGTCTGATTTTGTAACTCCACTATA
 AAATCTACCGATTACACAAACACATATCATCTTTACACAAATCATGCTTCCATCAACAGTA
 AAACATGATATGATTGCCAACATAACATCTCAACATAAATTTCTAATTTTATTTGAAA
 AAATCAATAAATAAGAAATCTCCCAACCGCAAAATAAATAAAGAAAGGGTTAATATGCA
 50 AACCTCGAAGAAGACTAGCAATTTACCAAGCATCCAAACGTGCTTCTTTACCGGCAAGTG
 ATCTCGCGCCCGCAAAACGTAAGAACGTTGATTTGAAAAAATGCGCGCTGAAGTCCCTGC
 TTCAGACGGCACTTTTTCACGTTTCGAGAACTGTTTCAACCTGTCTCTCATCTCAAGTCCAC
 AGTGACAGATTTCTCATCTCCGCGCAACAAACGGGAACAGCTCATTTGATTTTTCTT
 CCAAAACAGGATTTTCATCCATCTGACCACTTCCAGCCGGAACCGTATTTCATCTCGAA
 55 AAGGTTTGAGTTGCTCGCGCATTTTGTGGCAAGCTGCAATATTCAGCAAAACATGAGG
 TCAATTTTCACTCGCGTTTCTTATCTGTCAATTTGCACAGCGCAAGCCTTAGCGCAGAG
 AGAATCATGCTCTATTGGGAAAAACAATGTTTTCAGGAAGATGACTACATGCTCTGCTG
 CCAAAACAGTAAAAATGCGCTCTGAACAGTTCAGACGGCAATTCGAAAACCGTTTTAGC

CTTGAACGTTGATACCCGCGTAAACGTCGGTTGCGCATTGTGCGCCGTGAGAAACGAAG
 CGGCAAGCTCCCCGAGCAGCCGAGCAGCTCGCTACGCCCAATTGCGACTGCAAAATGCG
 CAATTTGGTTCGCGCGCGGCGGCGATGGTTTTCCTTGATTGATGGTCGATGCAACGCATTCG
 AGATGCACACAAACATTTTGTGCTCCGTGTGTTCTCAAACTATCGTACCGATAGCGCGCTT
 5 TTAATTTCGTATGCGAATATAAATAAAACGGTTGCGCAATTGCAAGGTTCGTATACACGGT
 TTGCTTGGTAATTTTTTATCAAGTTTGTGCAATTTTCGATTGATTTCCTATTAAACCAAAT
 AGAAGCCTCAGTTTCGGAATGGTTTCCCTTCACTACACCTGCAACCATACGTTGGCAA
 CATGGGTATAAATCTGCGTCGTATTCAAATCGGCATGTCCCAACATATCCTGAACACGCG
 GCAAAATCCAAGCCGTGCCGCAACAGATGCGTGGCAAAGCGGTGGCGCAGGCTGTGCGGGC
 10 TGATGTGCCCGATGCTTGCCTGACTTGCATATTTCTTGACAAATCATCCATGCCAACTGAC
 GGGAAATGCCGCTCTTTTCTGACTGACAAACAAATGCGTCGCAATTCCTGCCTTTCAGCA
 GAAATGGGCGTGCCCTCGTATATAAGCGTTCCACCCAATACGCGACTCCTGCGCCCATCG
 GGACCATCCTCTGCTTATCACCTTTCCCAGCGCGGTAATACAGCCCTGTCCAAATCCA
 CATTTGCCGAAGTTCAGCCGACCGCCCTCGCTGACGCGCAAGCCGCTCGGCTACATCAATT
 15 CGAGCAAAAGCCTTGTCCGCAAAACGTCGCGCGTGTGCGTATCCGGGCGCGCAAGCAGTC
 GGGAAATCTGCTGCTCGGTGATCAGGTCGGAATATTTCTTGCGATTTTGGGCGGTTTCA
 GCAAAACGGGTGGGATTGTCCGCTCTTATGCTTTCAGCGTCCATCCATATATACAGCGGTT
 TGCAATGCCGATTAATGCGCGCGCTTGCAGAACTCCGTTGCTCTCGTCAACATAAACCGCGC
 CGCGCAAAATCCGCTTCTGCTCGCATCTTTCAGCAATTTGCGCGATTGGGACGCGCGG
 20 CGATTTTTTCCAAATCGCGCGGTAAACCGTTTAAAGTATTCTGACTGAGCGCGCTGTCCA
 ACCACAGCGTTTCAAGCAGCCTGTGATCAAACTCTTCCATACCGTTCCAAACAAATG
 CCGTCTGAATCTTCTCAGACGGCATGGTTACATATCGGGAAGCGTTTCCAACTACT
 CCTGCGCGTGACCGCCACTTTGACTTTCGCGCAATCATGGGCGATTTCCTCATCTCTAT
 TCAAGACGAACGTACTGCGCTCGATACCTAACGACTCTTCCGTAACGTTTCTTCAATT
 25 TGATGACATCAAAAGCGGCGACACTGTTTCATCCTTGTGCTCAACAGCTCGAACCCGA
 AACCTGCTTGGCSCAAAATCTGATGCGCTTTACGCGCTCGCGGGAATACCGACCA
 CGGTATAACCCAAATGCTCAAACGTGTTCCAAACGCGCATGAAATCCAAGCCTTCTGCTCG
 TACAGCCGACGCTACTGCTTTCGGATAAAATACAGACCAAAGGCAGATGTTCTGCGCG
 AATGAAAATCCGCACCGCTGCTCGAAGCGCAGGTAATTCATATTTCACTCCATAGTCC
 30 TACTCCGATATTTCCATATTTCAAAACGGCAGCAGACGCAACCGCGCAATTGCCAAAC
 CAACCCCGATTCTACCGCCCAAGGACAAGGATTCAACCGCGGAACATCCAAACGCA
 CACACGACGGCATGAAAATATCTCATGTCAAACCAAAAATATGTTCCGATTAAAAACA
 GAATGTTATAAAACCAATCCCCAAAACACAACAGACCGCCCGCTACGGGCACTGCTCC
 TGTGACAGCAGCATACTTTACAGATGGCTGTTTTTCAACAAAATAACGCCAATCACTCAAA
 35 AATAATGGAATCAAAAATGTCATCCATCTGAAACGCGCTGCCCTCATCGCTGCTGCTC
 GGTCTCTGCTTTCCCTGCGCTCAGCCCACTTTTGGCGACAACGACATTTTAGGGCAA
 TTTTGAACAGAACATGCTTACTCTCCGATCCGATAGAAATATTCCGCGAAGACGAC
 ATACACCCACCAACACCAAGCATTAACGCGGCTGATTCTCTCTCACTGCTGCC
 CTGCTGCTCAACAACAAAACCGGACAGATACTGTATCAGAAAAACGCGACAGGATTATG
 40 CCGATCGCTCCATTTCCAACTGATGAGCGCATGGTGGTTTTGGATGCAAACTTGGAC
 ATGAAACGAACCGTTACCATTAACGCCGACGAAATGACCGCATCAAGGACCGCGGACG
 CGCTTGGCATAGGTACGGCACTTACACGCAAAAACGTGTCACCTGAGCCTGATGAGC
 AGCGAAAACCGCGCACCCATGCTATGGCGAGAACCTACCCGCGGCGATGGGCGCATTT
 GTGCGCGCATGAACCGCAAGCCCAAGCCTCGGATGTACGCGACCGCTTTTACGAA
 45 CCGACCGGACTCACTTCCAAAACGTTTCTACCGCAAGACCTGAGCCTTATGTCACAC
 GCGCGCGCAATATCGCAAAATCCGACCAACTCGACTTCCAACTACGCTCGGTACAG
 ACCAAAAACGGGACGACGAACATAAAAACCTCAATGCCCTGGTCAGAGAAAGCATGTGG
 AACATCGAATTGCAAAAAACCGGCTACATACGCGAAGCAGGCTGATGTTTGTCAAA
 GCCACATCTCAAAACCAACCGGTACCATCGTATTGCTGAACTCGCCACATCCGCCACA
 50 CGCGTCAACGACGCGCGCAAAATCGAATCGTGATGCTGACGCAACGCTCCTGACATACA
 AATGCCGCGGGAAAACCG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 295>:

GNMCW06F gnm_295

CGTTTCTTCCAGTGCAGCTATTGATTAGTTTATTAAATCGTTCACTTCCGGATATGGCGGA
 TGGTTATTGGGCATTAGGTTTGGGGTAGAAGCCGAACGTATCCACAATGAGCAAGCAGT
 AAATAATCCGAACGGTAGCGAAAGGGATAATAGAAAGCAGTTAATATCTGCTTTAGATAA
 5 AGGATTTGATGGATCTTTTAAAGAGAAGCACTTTACTTTTTACAACTCTGTGATGATGGA
 TGTAAACAAAGTTAGGTGTTGAATATACAATAGATGGTTGGCAAAAATTGGAGGTTGGGG
 TAATGGGATAATCAATGATTATATATAAAAGCTTGTAAGAAAGAGTGGACTGGAATATT
 TGAGATCGTTAATAATAACATCAAGCAAGGAAATGAAGCTTTAAAAATGAAATCAATAGC
 10 TGGTTCTGGATATGAAAGCTGCTGGGCAAGGAAATTTGGAGATGACTTAATATACACCGTGG
 AATAATCTCACTCAGCGTGCCGAAATAATCTATAATGACATAGTAGACCATACTAGTCAG
 GAATAGAAAGGTGTCAAGCCATTAAAGAATTGTcGAAAAAATGAAAAATGCTG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 296>:

GNMCW14F gnm_296

CCGATCCGACCACGCCGCCGCGGATTCCTTCAAACGGTTTCCCGCGTCTTCCCAATTAT
 CGTACATTAGGTTCTGCTACGGTTTCCGCCCAATGTGGCAACTTGGCGCCCTGTCCGAA
 15 TGTGCTGCGCGCTTTGCTGAACCTTCTGCCCTTGGCTTCTCTTTGTATGGGTTAAAC
 GGCAAGCCGTTTTTACATAGTCCTTGGCACATCAACTCCGTCACTTCTTTCAATCCGCT
 CCCTTGATGCGAATAGCAGGGCGCATCCGGTTCTTCCGCTTCTATACAGCTCTATAT
 20 ATTCAAAGSTCTTACCTGCGCTTACACCGTTATAAATCGGCTTGCTTCGGGTTTTTCGGA
 CAATGTCGGAACAAACATATCTCGGTAAGGTTGCCGTTATTTACCGGGCTCGCCTTCTG
 TTTATCCGGAAGTACTGCTGCTGTGTTGTTGCCCGGATTCTGTGCTGGCGGGTCT
 TCCGTTTTTCCGTAAACGGCTCAACATTTTATAGGACAGGCCGACAAACACGGAATCA
 GCAATAACTATTACGGCAGAGTGTAAT

25

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 297>:

GNMCX02F gnm_297

GGCCAGTGCCCAACAGTGCCAAAGCTTGCATGCCTGCAGGTCGACTCTAGAGGATCCCCGGC
 GACCAATTTGGGTTTTGAATAAAGCGGTGCGATTTTGGTGGAGATGGACAGCGCAATCGG
 30 GGAAATCATCAGTTTCGCCTATCGTGATGCGGAGCAGATCAGTGCAGAAAGCGGAAATCG
 GAATCGGGGAACCGAGGAAATAAAGGGGACGAATCCCAAAACGACGCGCCGCTAACAA
 ATACCGCCATAGCGAATTTACACGGGGTTTTGGGCTGTTTGCGCCCAATTTTGTCCACA
 TFGCCGCCATCAGTCCGGAAACAGGATGACCCACAGGCTTTGCATAGAATCTTTCCAAG
 CGACGGGACAGGTAACAGCAACGATGGTGGGTTGACGGTTTCGTGAAATAGACGGTTG
 35 CCACGGGTGTAATCTGAACACAGACGGCCCAAACATACAGATGGTCAGGAAAGACGGGA
 TGTAGGCGATGATGTCGGTTTGTGTCGGAACGTACGCGGGGGTGGTCAGCAGGCGGG
 CGAAATAGGCGATGACGGCAAGGATGACGGTAGATAATAGGATGCCGGAAGAAATTTGCGA
 GGTTGACAAAGCCCGGTTTTGATGGCGGTGCAAGTGGCGGATGAGGCGGATGCCACAGG
 CGGCCGCAAGTTTGGCCCTGCTCTTTGAAAGCGGATGGGGACGGTGGGGTGGGGCAAGT
 40 TTTTA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 298>:

gnm_298

CCTTCTTCGGCTTCTCAAAGCGTAGATTTTCATGTGGACGGTCAAACATATCCGACACC
 45 AGCAACCCGCTCCGTCCGAACGCAAGCGCAAGGCATATGCACCGCCCAACGCAACCGGC

AGCGTCAAAAACACCAGTCCCGCAAAACAGAGCCGCGATAAGGATATTTCTCGTTACAAAAC
 ATCCGGCTGCCCCCTCTTCGGAAGCAGACCGCATTATATAGCGGATTACAAAAATCAGGA
 CAAGGCGACGAAGCCGAGACAGTACAAATAGTACGGAACCGATTCACTTGGTGCTTGAG
 CACCTTAGAGAAATCGTTCTCTTTAGCTAAGGCGAGGCAACGCCGTACTGGTTTTGTGTA
 5 ATCCATATACCGCGCACTGCCTTGCGGCCCGCCGAAAGTTGCACAAACACCGTTCA
 TATATATCATGACGAAAAACGCCGGTGTAGCTCAGTCGGTAGAGCACGCCATTTCGTAA
 CGGAAGGTGCGGGGTTTCGATTCCTTCTCCGGCACCAATACCAAGCACAGACCCCTCCCTT
 CCTCGGGGAGCCTGTGCTTTTTCACATTTCCGCTTCAGACGGCACAACCGATATGAACAC
 10 CTCGACGCAACCGCCTCTGTCAGCGCTGGCTCACTCCTACGAACGCTACCGCTACCG
 CCGCCTCATCCACGCGTCGCGCTCGCGGGGCGCTCCTGTTCGCCACGCGCTCCGCGG
 GCTGCTCCACCTCCAAACACGGCGAGTGGATAGGGATGACCGTCTCTCTGCGACTTGGCAT
 GCTCAATTGCAAGGGGCGATTTACTCCAAGGCGCGGAACG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 299>:

15 **gnm_299**

ACTTGCATGCCTGCAGGTCGACTCTAGAGGATCCCGTTACAAAAGATCATTAAAAAATC
 TTTTCAGGAAATGAAAAAGAGATCTCGAAAAACATTGATAGAATTGAACGGATTCAAAAG
 TTAATTTATGGTCAAGTTATGCATAAGACCAATAATCGAGCAAAACCCCAACAAGTTTTT
 ATAATTTGTGTAATAATATGCTTCATGAAGTTCGGGAAGAGATAGCTAAAAAATCAAAAT
 20 TATTTATCGCTATATAATCTTAAATTCAAAGCTTTGAATGACCTGCTAACACCGTAT
 CTTCTCAGAAAGCCAACTAGAAATCGTTTCACTCCTCGGTAACCGAGCTCGAATTCGT
 AATCATGGTCATAGCTGTTTCTGTGTGAATTTGTTATCCGCTCACAATTCACACACA
 TACGAGCCGGAAGCATAAAGGTGAAAGCCTGGGGTGCCTAATGAGTGAGCTAACTCACAT
 TAATTTGGTGTGCGTCACTGCGCCGCTTTCCAGTCGGGAAACCTGCTGTCGCCAGCTGCAT
 25 AATGAATCGGCCAACGCGCGGGGAGAGGCGGTTTGGTATTGGGCGCTCTTCGCTTCCT
 CGCTCACTGACTCGCTGCGCTCGGTCGTTTCGGCTCGCGCGAGCGGTATCAGCTCACTCAA
 AGGCGGTAAATACGGTTATCCACAGAATCAGGGGAATACAGGAAAGAACATGTGAGCAA
 AAGGCCAG

30 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 300>:

GNMCY27F gnm_300

CCAGTTTCGATCTTGATTCTGTGATACCGAAGCCCGCGTCCCGGCCAAAAATCAAGA
 TGTTTTTTCGAAAAACCGCAAGCCCGGTTAGAGCTCGAATTCGTAATCTGGTCATAG
 CTGTTTCCGTGAGTGAATTTGTTATCCGCTCAACAATTCACACACAATACGAGCCGAAGC
 35 ATAAAGTGAAGCCTGGGGTGCCTAATGAGTGAGCTAACTCACTAATTTGCGTTGCGC
 TCCTCGCCGCTTTCCAGTCGGGAAACCTGTCGTGCCAGCTGCATTAAATGAATCGGCCAA
 CGCGCGGGAGAGGCGGTTTCGCTATTGGGCGC

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 301>:

40 **gnm_301**

GGATGCGGATGCGCTGAACATATTATCAACCGATGCCGAAACCCGAAATCTGGCGCGCGG
 GTGTAAAAACCTGATTTTAACGCCACACCCGCGCAAGCCGCGGCTGCTTGGAAACGAG
 GGTTCGCGAGGTTTCAGCGGATCGGACGGCGGCAGTGAGGAAGATAGGGGCAATTTTCG
 45 CGCAACCGTGTGTTTTAAAGGGGCACAAAACATTGGTTGCCTCACCCGATACGGAATCAT
 TGTCAACGAAAGCGGCAACGCGGGATTGGCAACGGCGGCAATGGCGACGTATTGGGCGG
 CATCATCGCAGCTGCTCGCACAGGGCGTCCGCGTTTTTGAAGCCGCTGCGCGGGCGC

GTGGCTGCACGGCGCGCGCGGATGTCATAAAAGAAATCGGCAGGCATTGCGGCAGGGCT
 GTTGCCAGGGGAAATCGCTCCGGCGGCAAGTGGCTGCGCAACCGGATAACTAAAAGTAT
 GTAAGAAGATATAGTGGATTAAACAAAACAGTACATCGTTGCCTCGCCTTAGCTCAAAG
 AGAACGATTCTCTAAGGTGCTGAAGCACCAAGTGAATCGGTTCCGTACTATTGTACTCT
 5 CTGCGGCTTCGTCGCCTTGCCCTGATTTTGTGTAATCCACTATACCATACAACCACCGCG
 GAATTAAGTTTAAATTTGAATAAAAGGTTCCGGTTCTGCAAAATACAGAACCCGAACCTT
 GTTCGGGATTGAAACCGGCTGCCGATTTTGGGCGGTGCGGCTTGCAAGTATCAAGATT
 CGCATATGCCGTCTGAAGCTCGGAGAGSTTCAGACGGCATATGCTTATTGGGCTGCTCT
 TCAACGAATCTCGGACCTTTCAAGATGCGGTTGTGAGAATAAGGCACAGCAGGTTGTAT
 10 GCAGCGGTTTGGAAACCTGATAACCGCGGTGCGTCAGGCTGTTGGCAATCTGATTGACC
 ACTGCGCTGACCAAGGCCCCACAGGCGCTGTTGCTGTTGCTGCTTCGCGGATG
 CTGGCCGAACCCGACCA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 302>:

15 GNMZ04F gnm_302

GACGCCAGCAACATATACGACGCCAGTGCCAAAGCTTGCATGCTGCAGGTGCACTCTA
 GAGGATCCCGCGCGCAATTAAGGCGCAATGTGAGGACGGCGCATCGGTCGCGCTGTGGG
 TGAATTTGTCGGGAGGCTTTGGTTAAAAATACCGATTTTAGCGATATGACCCCGGAACA
 20 ATTAGATTGGAAGTTAAGAAAAATACCGCCTATGCCAAACTTGCAGGATACAGTTGC
 AGCGCTAACGGGAGGAGATGTCAATCTGCTGCACAAACCGCACAAACGCGGTAGAAAA
 TAATCGGGTTAAGCTGTTGTAACCTGCTGCAAAAGTGGTTTAAAGTAGCCAGAAAGG
 ATTAAAAACCGGAAAAATCAACCTTAGAGATTAAAAACAGACGTTGAAAGACGAAAGTTA
 TAATTTAGCCGACAACCTGACCACCTTATTCGACGAAACATTGGATTGGAACGATGCCAA
 AGCCGTTATTGATATTGTCGCGGAACAGAGCTGAATCGCGCTAATAAGGGGGAAGCGGC
 25 ACAAGGTGAGGAAGTTTAGAAAAATCGTCTATAT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 303>:

GNMZ23F gnm_303

CCGCATGAAAGCGGAGACTTATTTTGTGCGCCTTACCATTCTTGGGAGAAAGGGCTGA
 30 ATGGAACACCAACGGACTCATCCGGCAATACTTCCCAAAACAAACCGATTCCGTAACA
 TCAGTGTATCGGGAGATACGCAAGGTTCAAGATGAGTTGAACCAACGACCAAGAAAAACAC
 TTGGCTACGAAACGCCAAGTGTTTATCTTGAATCTGTTCACCACTAATACACTAGT
 GTTGCACTTGAAATCCGAATCCAGGCGGTCTGAAACGATAAGGTTTCAGACGGCATTTT
 35 TTTCTTTATAGTGGAGAACTTTGGCATTTTTTTTGGCTCGCTTAGCTGATGATACGAT
 TCTCTAAGGTGCTGTAGCACAAAGTGA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 304>:

GNMZ29TR gnm_304

TCTGCGGCTCGACGCTTGTCTGATTTAAATTTAAATCACTATATTTTCATATGCTTATT
 40 TATCTTAACCTTTCCCGGTAACAAGGTAACAATAAGGGTATCGCTTCCCTAGTATAGGTT
 TTTTCCAAAAACCAAAAAAACCGCCTGCACTCTGGACGGTTTCCCCCTTGTTCCTTA
 CGTCTTGGCAGTATTCGCCGCAAGCTCTTTTCGCGTTGGCATTCGTGATTTGGCGGTGCT
 TCAGCTTATTTTTCGCGGATTTTTCGAGGTATTTTCAGATACCGCAAAAGATATCGT
 AAATTTAGGTTACTTCAATTAGGCGGATTTGACGGGATTCAGTGTACGGAAGGGGA
 45 CGGCACGATACAATCAGCTGAAATCCTTGTATTGATTGCAATTGGTTGACAGCGTTGG
 ATGGGATTGAACAAAAACGCTGAAATTTTCAGGCGTTTTGTCTGTTGGTGCCGACAG

CGAGATTGGAACTCGCACAGCCTACGGCCACTACCCOCTCAAGATAACGTGTCTACCAAA
TTCACCATGTCCGCATTGAAAACTGTTATTCTGTCTGCTGACGAACAAGG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 305>:

5 **GNMCZ50F gnm_305**

CGGCAGCTGCCAAGCTTGCAATGCCAGTGCAGAGCTTGCAATGCCTGCAGGTGCAGCTCTAGA
GGATCCCCCAGACGCAGGTACAGATTAGGCGGTGTGCCGTAATCGTACGAATGCCGATTTC
AACCTAAGCAGACATCAGTATTTAGGAAGTGATGTTTATGAGGACAAAGGTTTACGAA
GGGTGGAAAGGCACACCTGTGGGTGTTGGTATGGTCGCGCTTGAAAAACGTGTTTAAAGG
10 GACAAATGCCGCTCTGAAATCCGGTTTCAGACGGCATTTCCTGTTTATTTAAAGCAACAG
GAAAGGCAGCAATATCTGCAGTCTTCCTATTACACAAAGCGTTTATATGTTAATTTAAA
AACAAAGATAGTACAATACTCACTTGAAGGCTCAACCATGGCATCTCT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 306>:

15 **GNMCZ56F gnm_306**

GACGGCCAGCTAGGAAACGACGGCCAGTGCCAAGCTTGCAATGCCTGCAGGTGCAGCTCTAG
AGGATCCCCCTCCGTTTGGTTGCAACACCTTTGCCGCGACAGTCGGGAAATGCTGTTC
GATTCAACGCGACACAAATGAAAGTTCGGGGACAGTAAGAAATTTCTCAAAATTAGAGAATC
20 TCAAAATCCCGTGCAGAGTTATGGTAACGGTTGAAATGACTTCGACAGGTAAAGGCGATGG
TTCCTTCATTAATTGATTTTCAGGTGGCAGAAAAGCCGAAAGGTTGATTTATGAAATTTG
AAGAAGCTTTTATAGTTCAAGACTTGGAAACGCATGACTTTATTTATCCCGATCCTTTTCG
GTGATGTGGGGTTTACTCAAATATTAATCAGCAGGTCAATTTGAAAGCTACGAAGATG
CGTTGAATTCAGGCATTAATGAATAGGCGGAGGATTCAGATATTTCACTTCTTCGTTAA
25 AATCGGAATAAAAGAAAAACAGGCTCGGCGGGCGGTCTGTCAACCTTTACAAAGCCCGC
AACAAAGGAAAAATA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 307>:

GNMDA71TF gnm_307

CCCCCACCACGGGAAGCCTGTGATTTTATTTCCAGGCGTATATATGCGGGATGAAAT
30 GGTAGTTGGGGCGGAGGGCGCGCTTTTGATGTGCGCGACATCGCCAGTACAGCCGCAA
CATCCAAAGCCGCTATTGCTTTATTGTCGGAAGGCGGAACACCGCGCTCAGGGTGGT
CGCATCGGCGAGCAGGGCGGAGGTTTCAGACGGCATTCGCTGCGAGGAAAAGCTGGCGGA
ACTGCTGTCGGAATCGGTCTGCGTATTCGCGCGCTGCGTATGACGATGAAGACATTCC
35 CTTCTGTATACAGGGGATTCCTGCAATTTGGCGGAAGGCCAAAGATTGCGCTGCTC
ATTCACTGGAAGAGGCACTTGCCGCAATTGACCCGTTACGACTGGCCGGGAAATTCGACCA
ACTGCAAAAGCTCGTTGCAACGCTGTTGTTGGAGGCGGACGAGGAAATCGGCGCA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 308>:

GNMDB47TR gnm_308

40 CTGTCGGGGGAAGTCCACTTTGTTAAACATTTCAACAGGTAGCTCAAACCTGAAACTG
GTACAGTTAGTATTAAATGGGCATGATATATCAAGTTTCTCCATCCTTTATTAGGGGAT
TGACCGGGATTGTTCCGCAAGATGATGCTCTTTATGACGGAACATTTGGCGACAATAAGC
CATAACGCGTGATTTACCAACCTGTTACCATTTGAGCCCGCGAGATCAGCGCCGATATCG

TCCGTGAGGAGAACTACGGTGGCCAATAAATTAAGAACTACACCACTCAACTTCGGCCCG
 CAACACCCCTGCGGCGCACGGCGTATTGCGTATGATTTTGAGCTGGAACGGCGAACAAATC
 GTCGGTCCCGACCCGCATATCGGCTCTTGACCCGAGGTACGAAAACTGGGGGAAACC
 AAAACCTATCTGCAAGCCCTGCCCTATATGGACCCGCTTGGACTATGTTCATGATGGTC
 AATGCTCAAGCGTATTGTTTGGCAGTAGAAAACTTGTGCGTATCGATGTGCCCATCCGC
 GCCCAATACATCCGCGTGATGTTTCCGGAAGTACCGGCATCTCTCAATCACTTGATGGC
 ATCGGTTTCGATGCTTCGACATCGGCGGATGACCGCATCTTTACGCCCTTCGCGGAC
 CGCGAAGAGCTGATGACCTTGTACGAAACGT

10 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 309>:

GNMDB48TR gnm_309

CTGGTCGGGGGAAGTCCACTTTGTAAACATTTCACAGTAGCCCTAAAACCTGAAACTG
 CTGACGTTAGTATTATATGGGCATGATATATCAAGTTCTCCATCCTTTATTAGGGGAT
 TGAGCGGAGTTGTTCCGCAAGATGATGTCCTTTTGCAGGTCTATTGGGGAAAAATATT
 15 CATTTTTGTATGAAAGCCCAATATGGAGCTATTGAACAAATGTGCAAAAAATGGCACA
 ATATGACGATATACTTAAATGCCAATGGGCTATGAGACCTTGATTCGCGATATGGGA
 ATATCTTATCAGTGGACAGAGGCTTGAGAGTTATTTTGAGCTGACCGCGCAACAAATC
 GTCGCTGCCGACCCGCATATCGGCTCTTGACCCGAGGTACGAAAACTGCGCGTAAC
 AAAACCTATCTGCAAGCCCTGCCCTATATGGACCGCTTGGACTATGTTTCCATGATGGT
 20 AATGACGAGGCGTATTGTTTGGCAGTAGAAAACTTGTGCGTATCGATGTGCCATCCGC
 GCCCAATACATCCGCGTATGTTTGGCGAAATAACGCGCATCTCTGTCACTTGATGGC
 ATCGGTTCA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 310>:

gnm_310

TGCGCTGCTGCTGAAGGGCGCGAGCTGTTCAATACGGGAATGCGGTTATGTGCTGA
 CGGCTATGTGATGCCCTTTCGGGGGTGTGCTGCGTCATCGGGCTGTTGGGGCGGTTCA
 GGCCTCAGACGCGCATCGGCGAGCGCGCAAGTCAGGGGTCGCGGCAAGCGGACGGAT
 AGGACGCACTTTTCAGCGGGTGCCTCGAGAGCAGCCGATGTGTTTGGCAGCCGACGCT
 30 GGGGGGTAGTGCTAATGGCGGTTTCTTGCTTTATAGTGGATTAAACAAAAACAGTA
 CTCGTTGCTCGCTTAmCTCAAAGAGAACGATTCTAAGGTGCTGAAGCACCAAGTG
 AATCGGTTCCGTACTATTGTACTGTCTGCGGCTTCGTGCGCTTGTCTGTGATTTTGTGA
 ATCCACTACCATACAAACACCGCGGAATTAAGTTTAAATTTGAATAAAGGTTCCGGT
 TCTGCAAAATACAGAACCCGAACCTTGTTCGATATTGAACCCGCTGCCCGATTTCGGG
 35 CGGTGCGGCTTGAAGTATCAAGATTGCGATATGCCGTCTGAAGCTCGGAGAGGTTCA
 GGCATATGCTTATTGGGCTGCTCTCAACGAATCTCGGACCTTCAAGATGCGGTTGT
 GAGAATAGGCGCAGCAGGTGTATGCGCGGTTTGGAAACCTGATTAACCGCGGTGCG
 TCAGGCTGTTGGCAATCTGATTGACCATGCGCTGACCAAGCCGCCAACGCGCGCTGT
 TGCTGTTGTGCTGCTTTCGCGGATGCTGGCGGAACCCGACCAACACTCTTTTCGTTGC
 40 GGGAACTGACCAAGCCGCTGTTTGGCGGATACGCTGTCACGCTGTCTAAAATTTGATAT
 AAGTGCCGATATTCGTAACCGTAATGTACAAAACCGCATATTGCCGAAATTTCTGATGCA
 GTTTTTTCGGCGCGACGCGGTGAATATCGCGGCAATTGGTCAAGCCCTTTTGTGTAAGG
 TTTCTCCACGACTGCGCGCGGAAGACGTAATAGCCGCTTCGGAAGCGCGCGCGCG
 TCGAAGCCAGTACACCCGATGTTCCGTTGACATCGGCGGATTGCTTCAGCGCGGAACCA
 45 CCAAAATGAAGCCGTTTGCCTTCCCTGAATGACGTGTAGTCGAAATCGGCGCTTTT
 GAACTTGGCAGGCAGCAGGCCAACCGCGCGCAAGCCCTAAAATCAAGGTTTTCATCG
 CTTGCTCTCTTACCAGTTTTCATCAGGAAGTCCATAAATACGCCGATTCGGGAACAG
 CTTTTCCTCTTCAAACCTGCGGGAACGCGCCCTCTTTGTCTCCGGAACGGGAAGACG
 CAGTCCCAATGGGCGTGCACACCGCGGCGGCGATTCATTTTTTGTTGCGCGCTTCCAC
 50 AAGATATTTTCCATCTTTTCGGTCTGTTGCCCAAGAGTGTGCTGCTTTTCAAAC

5 TTCATAGACGGTATCGGGATAGCCGCCGTAATAATACAGGGATTTTGCCCGTTGCCGCC
 GCAGGCGGTTCAGAGCCAGAGCCGCCGACACAGCGACAACGGCTCAAGGTTTTTCGGATT
 CATCATTTCTCCTTAACGGTTGGGTTGCCATGCGCCGTTGTCAACAGCCTGAACAGGCT
 GTTGACGGCTTCGCGGATTGCCAAGTCTAAACTTTGCCGTTCAAGTCGCATCGTAGCC
 10 GGAAGTCCCGCCGAACCGATGATTTACGGTTGGAAGTGCCTATTCGCCCGCGCCCTG
 TGCAGTAATAGCAGATTTTCGGAAGTATTGACGTTGACGATATTCAGAGCCACTTTTGCATA
 GCGGATTTGCGATTTGCCGCGACCCAAATGCCGAAGAGCTGATGATGCCGACATCTCT
 GCGTCGGAATTCGGTTACATCGCCGTAACGACATAATCTGCCCTTTACGTTATCGCC
 TTTGCCGGAATGCCGATTCTCTGTTTTAATGCGTTCAAATGGTGCGGTTTCAGTACGTT
 15 GAAGCGGTTGGTCTGTTGCAGGTGCGTTACTAGAATGGTTTTTGCCCTGGGTCGCCAAACG
 GTCTTCCCGCTCGGAGAAATGCTTTTTTGAAGCTGGAGCGGTTGTGCAATGTTCCGAC
 GGAATTCGGGTTACGAACACCGTGATATTGCGTATTGTAGGAGGCGACTTCTCTACCTC
 GAGACTGCTGAGGATTCGGTCGACAGCCGCTCAGTGAACGCGAGCGCGGCAAGGAC
 AACGCGCGTGGAAACGGTTTTTCATAAAATTTACCTTAAGGTCAAGTTAAGGAAATAACGG
 GGG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 311>:

GNMDE39F gnm_311

20 CGTATTGCGCACCGTCCCAAGTCTCGCGGCTCTGCGAAGCGTCAAAAAGATATCCCG
 GCAGCGGGTCCCGTCTGTGACCGCGGAGAAACAATATCGGCTTCGCAACAAGCGAAACG
 CTTGGCGGAACCTCGCGCTCAAGTCCGCATAGCCCGCTGTTTCAGACGGCATGGCGTTTCAG
 ATGCGGCTCTGAACACTTTGCGGTATTAATCCGCATCTTACTGTCCAACTTCGCGGTTTCG
 CAACCTCCCGGTTACCAAACTAGGTTTCGATATGTCAAACCAACAAGGCTTGGTCAAT
 25 CTTTTCGGGCGGTACAGGATTCGACCACTGCGCTGATTACAGGCAATCCAAACCTACGGGCG
 CGAAACGCTCCAAGCCATTACTATCCAATACGGGCAACGCATGCCGTCGAGCTGGAACGT
 GCCCGCTGGATTGCGCAGGATTT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 312>:

gnm_312

30 GAATATCCAATAAGACAATATGTCTTTTTGAAAAATACTTTTGGwTTTTTCGCCGAAAC
 AGGACGGTTCAAGTTGCGGAAATGTTTGCAATTTTAAAAAGCAGCGGCGAGGTCACA
 ATGAAATGTCGAATGGGAGTGTGCGGGCGCGAAGTATCATCAATGCTGCCGACTGCCA
 TACTCTCTGAAATCTACAAATGATGCATCGATCAACAATATACCGCTTTAAAAAACCG
 35 ATGCGGCTCTGAAACGCTTTGCGGGTTTCAGACGGCATCAAAAGGGTACGGTCAGCGGATG
 ATGCGCGCGCGGATTTGTCGAAAAAGTCTCGGAATACGGCAAGCTCGGCTTGGGTTTCG
 GCGCGCGGAGAAATGTCTGCTTGGCTTCTCTCAACGGAATGCCGCGATGGTAGAGGGTT
 TTGTACAGCTCTTTGACGGCGGAATCTGCTCTCGCGTAAAACCGTTGCGCGCGATGCTC
 TCGCTGTTGAGCCCCGCGGTTTCGGCGCGGTAGCCGATGCCATAAAGTAGGGCGGCGACG
 40 TCTTTGTGATACGCTGCGGCAACGCGGTATGCGGCTAGTCGCGATGCGCGAGAAATGG
 aAAACGAGCGGTGATGCGGCCCAAAACGACGTAGTCGCGCATGGTAACGTGTCGCGGCAAGC
 GAGGCGTGTGCGGAAATGTTGTTGCCGATGAC

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 313>:

gnm_313

45 TTATAACATAACAAAATCTTTAACCCACACCGACAAAGSGTCACCATGAAGAAAACATT
 GACACTGCTCGCGTTTTCCGCCCTATTGTCCACATCCGCCACGCGCCACCGCGTCTGGGT

CGAAACCGCCACACGCACGGCGGGAATACCTTAAAGCCGACTTGGGCTACGGCGGAATT
TCCCGAATCTCGAACCCATCGCCAAAGACCGCCTGCACATCTTCAGCAAAACCGATGCGAGCT
GGTTACCGAAAAAGGCAAGGAAAAACATGATTCAACGCGGCACATACAACCTACCGATTACCG
AAGCAACCGTCCCGTTAAGGACGSCAGTTACCTCGTATCSCCGGAATATCAGCCTACTTT
5 CTGGTCAAAAAACAAAGCAGGCTGGAACACAGGCGGCATCAAAGAAATGCCTGACCGAAG
CTATTGCGCAAAACCCGAATGTTGCGCAAAACATCGTCAACGTCGGAACGAAAGCGC
GGACACGCGCATCATCAACAAACCGGTCGGAACAACTTGGAAATCGTCCGCTGGACAA
TCCCGCAACATTACGCTAGGCGAACGCTTCAAAGTCCGCGTTCTGTTCCGTGGCGAAC
GCTGCCAATGCCACCGTTTACCGCCACCTTTGACGGCTTCGACACGAGCGACGACGAA
10 AACGCACAAACCGAAGCACAGGCTTCTCCGACAGCACAGACGACAAAGGCGAAGTGG
CATCATCCCCCTTGCGCCAAGGCTTCTGGAAGCCAAATGTCGAAACACAAACCCGACTTCCC
CGATCAAGAGCGTGTGCCAAAAACAGGCGAACTACTCGACTTTAACCTTCCAAATCGGTCA
TTCCGACCATTAATCCCGCCCGCACAAAAATGCCGCTGAAGGCTTCAGACGGCATTTTT
TGTTCAAAACATCAATACCAACCGCGCAGTTTCATCGCTTTTCAACACGGCGGATATCA
15 TCATGTAAAGACGCGGTTTCGCAATCGACATCATACTCTTGCGCCAAAGTTCCATATATGCG
GGAACGCGCGTTCGACGAGCACGCGTTTCTTCTCTTGAACCTTCGTAACCTCCCAATAAT
AGCCTTCAGGCTTTTGCACCACTCGAAATAGGAAACGACACGCGCGCGCATTTGCGCA
GAAATTGAGGACGACCAATACGCGGTTTTCGACGAGGATCAGTCGCGCTTCGGGCGTAG
TCGGGCGGTTTCGCGCTTCGACTACGATTTTCGCGCGGACTTTCACGCGGTTTTCGGAAG
20 TCAGTTGGTTTTCGACGCGCAAGGCGGAGTACGCTCCACATCCAAAGCCAAAGTTCGG
CGTTGGTAATTTCTTTCGCGTAACCGGCTTCGTTGGTGATGAAGCTTTTCTTGAACCT
CTTTAAACAAAGCTTCCATATCCAAACCGTTTTCGTTGTAATGGCAACGTCACACGATAG
AAACCGCAACAACCTTTCGCGCGGATTGATGCGCGTAATAACCTGTGTGGTAACCCACAT
TACCGAATCTGAATGGCGTAAGTGGCACCTTCACGCTTTCGCCAGTTTTCGCAAG
25 CTTGACGCGCGCGAGGTTTCAGCGGTAAACGCGTAGCTCGGTACGCGCAAGAGCGCGC
CGAACTCAACCGGTTTTCGCGTAATACGCGCGCGCGGAATGTTTCACACGCTTTTCAT
AAGCATCCACCATCCACGACATAATTTGCGGTTGGTATTCACATCGGGGCGGGAATAG
CGATTTCTCGCAATCAGCGGGCGAATCGCTTCAGCATAGCGCGCGGCGATGCGTTCCA
GTTCCGCTTCGGAATAATCGCGCGGATCCAAGTAAATGCCGCTTTGCGCGCGCGGTAAG
30 GAATACCGCAACGCGACGATTTGATGTCATCAAATGACAGGCTTTGACTTCGTCCA
AATTCACTGGGATGGAAGCGCACGCGCCCTTTATAGGGGCGCAGCGCGTTGTTGTGTT
GCGAACCGGTAGCCGTAAGGTTTTCGACGCTGCTGCTCGAGTTTTCGCGGAAATGTA
CTTCCACACGCGGGTCGGACTTTCAGGATTCATAAACGCGCGGATCGGTTTTCAGCG
GGTCAACGCGCGTTTTCACCTGTTTCGCGCGGATTTCACACGGAATTGAGGGTTTCTTTG
35 CAAGGGCTTCAGACATTTTGCTTCTTTTCACAAAGAGAGGTTTCGGAATGGAACAAGCCA
TCAGGTTTCGCAACTATAACCAATTTTCAGCAAAATGTAATAGCGTGTAGTTGGAATCGG
CCCGATTGTAATCTATATATGATTTTATTTCCCAAGCGCGCAGGAATCCGTCGTAAT
AAGCGGACACATATCCAAAAAGCAAAATGTCCAATTAATAAGATATAAAGATCGTT
TATTTTAAAAATTTAATTGGAAGCGCGCGGGATTTGCACACCTTCCCGACTCCGTT
40 CCGAAATCCGAAACACCGCGGCAAAACCTGTTTCGATTGTTAAACATCATACATATG
AAGCCCTGTGCAACGATGTTAAATAAACCTTTTCACCCGACAGAAACCGGATTATG
AATGCAGGCATCGAACAGTCCAAGCGCTGCCTTCGATTGGAAGGACACATGTGCGAT
TCCTGCCCCGACTTGCCTCGCGCGCAGAAAGCGATTTGGAACAACTCGGATGAAACCG
CTGCTGCCAAAGTGTTGAAAGCTATGTGGGCGACGGCATCGCGAACTGGTTACACGG
45 GTCCCTACCAACGACCGCGACGCGGAAGCGGATTTCGAACTGTGGGAAAGGTTTTCGTA
TCTATATGAAATACTACCGCGACCATTTGAGCGTCTTTCACCCGCCCTATCCCGAAACCG
AAGCGCGCTGGCATTCCTTAAATCTTTGGGCATCCGCTCGCGCTCGTTACCAACAA
ACGAAATCTCTGCTCGAGCTTCAAACAACTGGGACTCGCGACTATTTAGCGTGA
TACTCGCGCGGACAGCTGCCCCGAGAAAAACCCAGCCCTCGCGCTCGCGCACGCGG
50 CCGAAGTTTTCGGTATCGATGTTGCAAAACATGTTATGTCGCGACTCGCGCAACGACA
TCATCGCGCCAAAGCGCGCGCTGCTGAGCTTCGCTTACCTTCGGTTACGGCGGATA
TGACGCTGCTCTCGCAAGACGATGCGACCGCGCCGACTGGATTATCGGCTCGCGCG
AAATTTACGAAACCTTGCACCTCAGAAAAACAAAGAGAGTAGGCATTCGGACGCTCC
GGTTTTCGCGCTATGCGCTCTGAACCTTCGCCACGCGGAAACCGCGCATGAACTCG
55 CAAAAATTCCTACGCGCGCGCGGATGGACATCTCTCGCGCAAGAACTCAGCGCGATC
GGCTGGAACGCAAACTTGACACGCGCGCGGAAGCGAAGGAGTTGGAACAACTGTTA
AACGAATTTTCGCAACGCACTGCGAGTCGGATTTCGCGCTATGCCGAAGCTATATCGCG

AGCAAAAGCCGCAAAACCGGTTTCATTGAGGCTGAAACAGGCTTTGGCGCAACAGGGCATA
 GATGAAGAAACCCAGCCGCAACCTGCTCCCGACCGCTCAAGCGAAAACTGGCCGCCATA
 GCGCGTGTTCGCTAAAAAATCAAACATCCGGCCGCCGACCTTAAGAAAAACAAAAACAG
 GCACCGTTCTCTGCGCTATCGCGGTTTTGATGCCGATACCGTTACAGACGGCATTGAAACAT
 5 CCGTGGGATGACGGCTGGGAGGAAGACTGCTGAATCCTTGAATCTTTTGCATGA
 CGCGCTAACCTTACCTCCATTTCCAATTTTCCGATTGAGAAATAAATGTCGGAACAATC
 CGAGAAAAATCAACAACCCACTTTTGAAGATGAACGCAAAAAACCGGTTTACCGTATGGG
 TCAGGCAGTTGCCGGATTTCATGCTGTCGTTGGGCAAGCGCTATTGGCACTCGTGTTTT
 CCTAGTCTTCCGTTTTTGGCTTTCTAAACAAATGCCGCTGAAACCTTCAGACGGCAT
 10 CGGCAGCGCATTTTCGGCAGGCTATCCCATCATAGCTTTTTTACGTTGAATTCACATTTT
 CCATTCCCTAAAAATTTTCACACCCATTTCAAATACCCCTTCTTAAAAACAGGTACACT
 ATGACACAACAAACGCCAATGCTTCGCACGAACTCATTATGTCGGAACGATGATGCGG
 GACACCGCCAATTCAGCGGCAACGTCACAGCGCGGCAACTCCTGCTCCTGCTCGACCAA
 GTCGCTATTCTCGCGCCAGCGTTACAGCGGCAATTATTGCTTACCTGTCGGTTGAC
 15 AAAGTCTGTTTAAAGAACCATTCATGTCGGGACCTGGTTACTTTCTACGCGCAGCGTA
 AACTACACGGGGCGTACCTCTATGGAATCGGCATCGGTGTCGAGCACAAAAACATCCGT
 ACGGGAGAAATCCGCCATACCAACAGCTGCTACTTCACCATGGTTGCAGTCAAAGACGG
 AAACCGTCCCTGTCCTCCGCTGGAATCTTGACCGACGCCAACGCTGCCGTACGAA
 AAGCCAAAAACGCAAGACATCAGCCTGCAAGCCTCCGGAGACGTGCTCCTGCGGCTGC
 TGACGGCGGACATAGCCGTCTGAAGACAGGCACATCGCGCCATCCGTTTCCATTGCAAA
 20 CGGATGAAATCAAGCAATATAGTGGATTAAATCAAACCAAGTACGGCGTTCGCTCGCT
 TAGCTCAAAGAGAACGATTCTCTAAGTGCTGAAGCACCAGTGAATCGGTTCCGTACTA
 TCTGTACTGTCGCGGCTTGTCGCGCTTGTCTGATTTTTTGTTAATCCATACACCCAA
 CACAGTCAAAACAAATTTATATGCCCATCCCTCCGAATAATTTGAAACACAGCGGCCA
 25 AAAACGAAATGCGCTCTGAAAACTTTACAGCGGCAATTTCCAATTTGATTACGGCA
 AAGTCAGAACGCGATATAGCTGTCGGGTTAACCGGTTTGGCGTTTGACGCACTCGAA
 ATGAAGCTGCGTTCTGAAGACATCGTATTGCCATCAAAGCACTGCTGACCGGCTTT
 GACCTGCTGCCCTCGCGACGCAATTTTGGTTGTCGCCGTATGCGGTACGGAAGA
 AGAATTATGCTGGATGATGACCACTTTCCGTATCCCTCAAACTGAACGGCATACAC
 30 CACTTTGCGGTGAGCGCGGCCAAAACGGGCTGTCCGCGATTACCGGCAATATCGACACC
 CTTGTTGTCGCCCGCAAAATCGGCAACCACTTTACCTTGGTCGGACGCTGCCAAACAT
 GCGCGCCAGCGAACCGGTGCGGGAAGCGGAAGCGGCAAGGATTGCGGGCGCGGCGGG
 AACCCTGTTATTTTCCGACGCGGCGCGGCGAGGTTGCGCGCGGACTGCACAGCGGTTG
 CGCGCGGGTTTACAGGGGTTGACGCGCAGCGGTACGCGGGGCTGCTTTCTACCGG
 35 TCGGTTTTCGGTGCGGCATATCTGCGCGTTGACTTTAAACAATCTGACCGATGCTCAA
 CATATTGTCGGTCATGCCGTTCCACGCAAGGAAATCGTCTTGAGAGATATGGTAGCGTTT
 GGAAATGTTGACACCGTGTGCGCGCGCAATATGATGCGTCGCGCGTTAATGTCGAC
 GGGTGGGACTGTACGGGCGGTTGCGCGGCAAGCGGTACGCGGGGCTGCTTTTACGGC
 TCGCGCTTTCGGTGCGGCATATCTGCGCGTTGACTTTAAACAATCTGACCGATGCTCAA
 40 CGTATTGTCGGTCATGCCGTTCCACGCAAGGAAATCGTCTTGAGAGATATGGTAGCGTTT
 GGAAATGTTGACACCGTGTGCGCGCGCAATATGATGCTGCGCGCTGATGTCGAC
 GGGTGGTGAAGGAACGTATGTACCGGAAACGGAGTGCAGACGGCGGGAACATAAGC
 AGGAGCGGATATAACCGGCGCGCTTTCACCGGGGCA

45 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 314>:

GNMDE70F gnm_314

CCGTCAAAGCCACGGCGGCAACAGCGGTTGGGCGGCGCAGATTTCAGCACCGCGCTGT
 TCTGCGGCTGCTCGAACAACCGGACTCTCCCAACTCAACGGACAAGACAGCCAACCTCC
 TGCTCCGGTGTGCGCGGCGGCAAGGACAATTTACACGCAACCGAAGCGCGGATTTC
 50 AGGCGACGGTTTCAGACGGGATTGGAATCGACACAGCA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 315>:

GNMDF12F gnm_315

ATGACGACGCAGGCTTCGTCTATCATACAGGTTTCGTGGATTTCGGGCGTGCAGTTTGG
 AAAGTTCGGATTGCGTTCATTTTCTCCTTCGGTAAGGTATATATTCGTTAAAGGATTTA
 TTAATATATCCCCCTGATTGCTTTTAAATCTGCCTGTTATATCGACCCGAGTAAATG
 TATTATCGGGAATATCAGCTTATATATCATTTTATGGACTTTTACAGCATAAACCTTAA
 ATATATCGCCCTCTTTTATATCAGCATCACACTCATATTTTCTCGCTTATTAATA
 AAGCAAAACGAGATATTTCGTAGGATAGATAAGAATAAGATAACTCGATATATCCCTATT
 ATTTTCCATTTCGCAATTTTTTCCAAATATA

- 10 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 316>:

gnm_316

CAACAAAGCAATCTAGAAACCCGTCATTCCGGAGCAGGCGGGAATCCAGACCTCCGACGC
 GCGCGGAATCTATCGGAAATGACTGAAACCCCGAGATTCTAGATTCTACTTCGCTGGGAA
 TGAGCTGGTGCAGGTTTCCGTATGGATGGATTTCGTATTCCGAGCAAGCGGGAATCCAGA
 CCCCAGCGCGCGGGAACTCTATCGGAAATGACTGAAACCCCGCTTCTAGATTCTCAGT
 TCCGTGGGAATGACGTGGTGCAGGTTTCCGTATGGATGGATTTCGTATTCCCGACAACAC
 CGTAATCTCGAAATTCGTATTCGCGCAGGCGGGAATCCAGCCCCGTGACGCGCGCGGA
 ATCTATCTCGAAATGACTGAAACCCCGAGATTCTAGATTCTACTTCGCTGGGAATGACGT
 GGTGCAGGTTTCCGTATGGATGGATTTCGTATTCCCGCAGCGCGGAATCCAGACCCCTG
 ACGCGCGCGGAATCTATCGGAAATGACTGAAACCCCGCTTCTAGACTTCACATTCTGCTG
 GGAATGACGGTTTCAGTTGCGCTCCGACAACACCGTAATCTCAAACCGCGCTGACAACAC
 CGCAATCTTGAACCCCGGATTTCGCAyAGGCGGGAATTCAGACCTGTCCGCAACGAAC
 TTATCGGATAAAACAGTTGCCCAAACACGCGTCTATAGTGGATTAAATCAAACAG
 TACGGAATTG

25

- The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 317>:

gnm_317

GGTTTCGCCACCTCTGACTTGAGCGTCGATTTTTGTGATGCTCGTCAGGGGGCGGAGCC
 TATGGAAAACCGCAGCAACCGCGCTTTTACGGTTCCTGGCCCTTTGCTGGCCTTTTG
 CTCACATGTTCTTCTCTCGCTTATCCCTGATTCTGTGGATAACCGTATTCAGCCTTTG
 AGTGAGCTGATACCGCTCGCCGCAAGCCGACGCGAGCGAGCGAGTTCAGTGAGCGAGG
 AAGCGGAAGAGCGCCCAATACGCAAAACCGCTCTCCCGCGCGCTTSSCGATTTCATTAAT
 GCAGCTGGCCAGCAGAGGTTTCCGACTGGAAAGCGGCGAGTGAGCGCAACGCAATTAATG
 TGAGTTAGCTCACTATTAGGCACCCAGGCTTTACACTTTATGCTTCCGGCTCGTATGT
 TGTGTGGAATTGTGAGCGGATAACAATTTACACAGGAAACAGCTATGACCATGATTACG
 CCAAGCTCGAAATTAACCTCACTAAAGGGAAACAAAGCTGGAGCTCCACCGCGGTGGCG
 GCGGCTGTAGAATAGTGATCCCGCGGCTGCAGGAATTCGATACTCAAGCTTATCGATA
 CCGTGACCTCGAGGGGGGGCCGGTACCCAATTCGCCCTATAGTGAGTCGTATACAAAT
 TCACCTGGCGCTCGTTTTACAAGCTGCTGACTGGGAAACCTGGCGTTACCCAACTTAAT
 CGCCTTGCAGCACATCCCCCTTTCGCCAGCTGGCGTAATAGCGGAAGAGGGCCGCGACATT
 CGCCCTTCCCAACAGTTGCGCAGCCTGAATGGCAATGGCAATTTAAGCGTTTAATATT
 TTGTTAAATTCGCGTTAAATTTTTGTTAAATCAGCTCATTTTTTAACCAATAGCGCGAA
 ATCGGCAATACCTTATAAATCAAAGAATAKACCGGKATAKGGTTGAGTGTGTGTTCCA
 GTTTTGAACAAGAGTCCACTATTAAAGAAGCTGGACTCCAACGTCGAAGGGCGAAAAAC
 GCTCTATCAGGGCGGATGGCCACTACGTGAACCATCACCTTAATCAAGTTTTTTGGGGTCG
 AGGTGCGCTTAAAGCACTAAATCGGAACCTTAAAGGAGCGCCCGATTAGAGCTTGCAGC
 GGAAGCGCGCGAACGTGGCGAGAAAGGAAGGAAGGAAGGAAGGAGCGGGCGCTAGG
 GCGCTGGCAAGTGTAGCGGTCAAGCTTGGCGTAAACCAACACCCCGCGCTTATGCG
 CCGCTACAGGCGCGCT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 318>:

GNMDI14TR gnm_318

```

5  ACCTGCCTATGATTGGCTCTGCCACTTGGGCTTTGCCGTCAAAATGCGTGTGGGTGTGGT
   TGTGCGATTGTTTGTCCAAATCGTCAATCAGCCGGTCAAAATGGGCAATCAGTTGTTTGA
   CGCTTTCGACTTGGCTTTCATGAACCTAATGCAGACGGTTTTCTCGGCAGTCCGCATAT
   CCACCAGTTGGTTCGGCCGGTTAACCAGGGTCTCAACACTTCTTCCACTTCGGTGGGCA
   GGTGGAAGGGCATTGTTTGCGAATCTGCCGTGGTAACGTATCTAGAACTTTAATGGCG
10  GTAAGCTAGAGCATGTTCCGAGTGGGAAGTACCGTTTTTACCGGTGAAACCTTGAACCAA
   TACTTTACTGTCITTATTAATCAATACGCTCATTTCTTCTCCTTAGGCGTTTACGGCTG
   CACAAATTTTTTCGGCTGGCTCATTCAGGCCGTCTGCAGAAGTCAGTTTCAGACCGCTATT
   CGTTCAGGATTTTCGGCCCGAGTTCGGCGTTGTTCGCTTCCAAACGAACACGACAGGAA
   CGTTGACCTGATTTC

```

15 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 319>:

gnm_319

```

   CCGCTTTTAAAAAGACGTTTTAAATGCAGATATCCCGCTCCTGCTGGACTTTTGGGCTC
   CGTGGTGGGCCCTGCAAAATGATTGCCCGGATTTTGGACGACATTGCCGCCGAATTTG
   AAGCCCGTCTGAAAGTGGTCAAAATCAACATCGACGACACGAAGCCACCCGCTCCGCTT
20  TCGGCGTGGCGGCATTCCGACCCCTGATGGTGTTCAAAAAACGGGAGTCTGCGCACCA
   AAGTCGGCGCATTGGCAAAAGTCAAGTCAAGCTGACCGCTTTTGTCAAGCTCTATCCGCTGAT
   AAAGCGCAATCGAAAAAGCCCGCGGAAGTTCCGGCGGCTTTTTTCGACCCCTTAAGATTT
   GTGCGGGAATTCACGACCTATGGATTTTTTGTGTGCGGAAATCTTCGGGAACGGATTG
   TTTGGAAATGTCTTTGACGGCGATTGTTCCGATACCAAGTCGTCTAAGACGAAGCTGG
25  CAGGTTGTTGGAAAGTACAAAATGCCGCTCTGAAGCGAGCAGCTTCACCGCGCCGTCAT
   CAGCTTTTTGTGGTGGCGCTGGATGTCGAGGATGTCGGACATTTTCTGCTGTGGAAAA
   ACTGGCGGGTCCATCAATGAGGTCAAGCCGCTGCTTCCCATATGCGCGTCTGAAG
   ATATTTGGAACACGTCGGCGCGGACGATTTTGTGTGTTCCGTATCGATGCCGTTCATATTC
   AAAATTCGCTTTTCGCCCAATCAAGATATGTGTTGGACAAATCGACGGTTTCGCTGGATGC
30  CGCGCCCGCGGTGGCGGCATAGACGCTGAAGCTGCCGCTGTAGGAAAAACAGGTTTAAAAA
   ACGTTTGGCCCGCGCGTTTCGCGCATTTTTGCGCGTGTTCGATGATCCAAAAAAG
   CCGCGATCCAAATACTTTATCAAGTTGACCCAAAACCTTCGCGCGTTTTCGCTGATGAC
   GAAATCGTCGCCCGCTTCCCGTTTTCTCTGATCTGTCGAAACCTTTTTGGCGTTTCGG
   GCGTTTGAGCGCGATTTGTTGCGGCGCAAAACCGGTACGCAAGGCGAGCGGCTTCCAAAGC
35  TTCGCAAGCCACGCTTCGTATTTCTGGGCGCATCAGCAGCGGATATCGTATTTCTG
   AAGTGGATTGATCGCGCTTAAACATCGCGCGCAAGGGGGAATTTGGGGGATGTCGCGGTC
   GTAATCGCGCCAGGCTTCGATCGCGTTGCGTTTCGCCATTTCATAGGTGTTTGATGTT
   TTTGCCAAGCGGTTGGCAACCGGTGTGATCGGTCATTGGTTTCAGGCGGAATAAAGT
   GGAAAAACGGCAATTTTACTGTAATTAACGCCCGATTGCTTGACCGTTTCGGGCAAAACCT
40  ATACCATTCGTCGCTTATCTTGTATACGAAGCCATCGCCTTCCAACTTAAACCGCCCTT
   ACGGCGCGGTTTCTTCTGTGCTTTGATTTTGCAAAAGCATATCTGTGCAAGTCGCGTCG
   ATGTAAACCAAGCAAGCCGCTTGCACAAACCTGTAACTTCAATTCCCCGTATCGTT
   ACCCTTCCCTGCTTCAGGCGCTCTGAACCTTTCGGACGCGGCGGTGTTGTCTTCCAAGG
   ATAGCCATGTCTATTAATTTGCGGATTTGAACCTTGATAAAACATTTGTCCGCGCTC
45  AGCAGCGAGGGTTACGAAAGCCGACGCGGATTCAGGCGCAAGCCATTCGGTTGCTTTG
   GAAGCGCGGCATCATGCGCTTCGGCGCAACCGGCTCCGCAAAACCGCGCTTTCTG
   TTACCGACTTTGCAAAAACCTGACCAACGACGAGCAAAAACCGGCAAGGCGCGCGTGCT
   TTGCTGTGACCCCGACCGCGCAACTGCGCGCTCAAGTCGAGAAAAACCGCTGCGGCTAT
   GCCAAAAATATCGTTGTTTCCGACCGTCAGCATCTGTCGGCGCGCGCTTTTCGCGTAC
50  CAAACCGGCTGAGCAACCGGTCGATCTGATGTGCCACGCGCGCGCTGATG

```

GACCTGATGCAAGCGGCAAAAGTTGATTTTGAACGTTTGAAGTGTGATTTTGGACGAA
 CGCGACCGTATGTTGGATATGGGCTTTATCGACGACATCGAAACCATCGTGGAGCAACG
 CCGAGCGACCGTCAAGACTTTGTTGTTCTCGGCCACTTGGGACGGCGCGGTTCGGCAAACTG
 CGCGCGCAAACTGACCAAGACCCGTGAAATCATCGAAGTCGAACGGGTGGACCATCAAGGC
 5 AAAAAATCGAAGAACAACTGCTGTACTGCGACGATATGCGGCCACAAAAACCGCGTGTCTGAT
 CATATCTTTCGCGGATGCCAATATCGATCAATGCGTGATTTTCAAGTCCACCAAGGCCATG
 ACCGAAGTCATTGCGGATGAACGTGTACGAAAAAGGTTTCGCCGCAAACTGCCTGCAACGGC
 GATATCGCGCAAGGCTGGCGCAACCGCACGCTGATGGATTTGCGTAAAGGCGCGTCCAAAA
 ATTTTGGTTGCCACCGATGTTTGGCGCACGGGTATCGACGTACCGACCATTACCCACGTT
 10 ATCACTACGACCTGCCGAAACAGCGGGAAGACTACGTCCACCGCATCGGGCGCACCGGC
 CGCGCAGCGCGCACGGGTATTGCGATTACGTTTGCAGAGTGAACGATACGTCAAAGTC
 CACAAAAATCGAAAAATACATTAACGAAAACTGCCGGAATGACCATCGAAGGCATGGAA
 CCGACCCGCAACGCAAAATCCGCGCGCGGCAAGCGAAAGGCAAGGCGGTGGGGCGAT
 CGTAGAATCCGCGGTTTGGCGCGCGATCATAAACGAGCAAAAGAGGCTTCGGCGGCAAA
 15 ACGCGCGCGCAAGGTTTCAAGAAAGAGGCTTTAAGAGAGACGTTTCAAAAAAACCGCGC
 GAAGGCTTCAAAGGCAAAACGCAAAAGCGCGGATTTTTCAGGCAAAAGCGAACCGCT
 TACAAAGACCGCTAAGCCCCAACCTGCCGCATAAACCAATGCCGCTGAAACCGGATTTCG
 AGTTTCAGACGGCATTTTGCATGTTTACGACACGCGCGGCTTTGATACCCAAAGGATT
 AGGCTGTAAATAAAACCCCTTTTCCGCTTTGGCAACGATTGAAATTTTCGCTAAATTCAAA
 20 TATCTGAATTCCTTCTCGCACGGGAATGACACGGAGGGTTTCAGATGCAAGGTGGGCAT
 TCTTCGCCACCCAAATCCCGCCCTTGCAACGGTGGCGAAGATGCTGCCCTACGCGTTGA
 CTGTTTCGATATGATGCGCTCTGAAACCCAAACGGCGCATGACAATGCCACCTGCCAAC
 GCACGTAATCAGAATTGCCATCCGACATCAACCGTTGGAACCAAAATGCCGTCTGAA
 AATCAACGGGCAACATAACAAATGCTCCCTAACAAATGCAAAAAATGCCCTCTGAAAGCTCTT
 25 CAGACGGCATTTGGCGCGCGGGTTTACCGCTTCTGCGCAAAACCGCGCATAGCGGGCGG
 CGGTAATTGCGGGCGGGCGGCTTGTGCGGCGGTAAACGCTGCGCTGCGCCCGCTGTGGT
 TTTGCAACGGAGGCTGCGCGTGTTCATAATCCCTGCTGGTGGCGCATTTGGGGCGTGGGAC
 TGTATGTTAGGCTGCACGCGCGCGCGGGCGACGGGACTGTCTTGGTTGCCTGCCCGTGTG
 AATTTGTTTGCAGCGCGTTGCGGATAAACGCGGCTGCGCGCGCGCGACAGGCTTTGC
 30 AGCAGCGAGCTTCTGTGATTTGCTGTAATATACTGCTGCCCGTCTTACCGGTAAAGC
 GGTTCGCCCGTGTGCGGTTGCTGTGCTTCGCGAGGAATGGTGTCTTTGACTGCTTCG
 GGAGTCAGTTGGTAAACGCTATCTGTCTGCTGTGCGAGCTGCTGTTGACGGGCTTCA
 ATCTGTTTCTGCTGCTGTTTCGAGCGC

35 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 320>:

GNMDI61TF gnm_320

CACCTGCACGCACAATTTCGTGTTTCCAACGTTTTGCCGATAAAGGGCATGATTTCCGGAGT
 GTTCGCCGCGATTACCAATCGCAATTTCTCGACAGCCGCGATTTCCTCAATGAAACGAA
 CGCAACGGGTGCA

40

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 321>:

GNMDI91TR gnm_321

TCGCGCACGATGATGGGGGGCAGTTCTACGGAGATAGGGTTGCCTCTGATAACGTTACT
 ATCGCATTTGGTCTCATGCCGTCAACGATGAAGTTCACGCGATCGGGACGCTTAAAGA
 45 CGGTTCGCGCATCGCGTCTGCCGCTCCGATTCTGGAGTTGGGCAACGGTTCGGGTCT
 GAGCATCAACCTGC

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 322>:

gnm_322

CAAAACTGTACGTACAGTAGTTTGCAGACCCGATGTACGCTTTTATGGACGAAGAATT
 CAACCAATATGAAATCGAAGTTGACAACTTGGCGATCATTTTAATTTATCGGGTATAGA
 CTATTTCCGCGAGGACGAAGATATAGATTCCACGATTGAATACATGGAGCCAAGTACG
 5 TCTATCAACACTATATTAACACAGCCCTTTATTTTGGAGTTTGGGGTAAATTTTAAAC
 CGTCATTCTTACGAAACAGAAATCMAAACAGAAATCTCAAATCCCGTCATTCCyGCG
 CAGGyGAGAATCTAGACATTCAATGCTAAGGCAATTTCTCGGAATGACTGAAACTCAA
 AACTGGATTCCCACTTCGTGGGAATGACGGAATGTAGGTTTCGTGCGAATGACGTTGGT
 CAGGTTTCGATATGGATGGATTTCGTATTCCCGCGCAGCGGGAATCTAGACATTCAATG
 10 CTAAGGCAATTTATCGGGAATGACTGAACTCAAAAACTGGATCCCACTTCGTGGGA
 ATGACGCGATTAGAGTTTCAAAATTTATTCTAAATAGCTGAACTCAACGCACTGGATT
 CCGCTCGCGGGAATGACGAAGTGAAGTTACCCGAACTTAAACCAAGCAACCCGAA
 CGAACTGGATTCCCACTTCGTGGGAATGACGGAATGCAGGTTTCGTGGGAATGACGGAAT
 GCAGGTTTCGTGGGAATGACGG

15

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 323>:

GNMDI95TR gnm_323

TCCACACAACGTCATAATTTCCACACAAAAACGCCAACCGCATTTGGTTTGACACGCCA
 GCAACCGCTTTTTCGCTTCACACAGTGATATTGTGTGGCTTTTCGTTTAAAGATTGTG
 20 TGTTAATAGGCGGACAAAGCACCAGGAGGCGAAGAAATTTATTTTAAACGCAATAACA
 GCCAGCCAGCCAGCCAGCCAGCCAGCCAGCCAGCCAGCCAGCCAGCCAGCCAGCCAGCA
 GTCAACCAAGCCAGACGCCATTATAACAAGGCGAAGACAGCAAAAACTGCCCGAAATG
 AGCGAAGCGACAAATTTGCCGTGGACAACTCTACGGCGAACAACTTTACCACTCCG
 CGCCACGCTACAACGAAGCCACGCTGGTTAAAGCCC

25

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 324>:

gnm_324

CGCGATAAAGAGCAGCTTCCGGTTTCGATTACTTAGTTAACGGTATCAAAATACAAGGT
 CAGTTTGAGTCTTTCGATCAATACGTTGTTCTCCTGAGAAACACTTCGTCACCCAAATG
 30 GTTTACAAACACGCCATTTCCACCATCGTACCGGACGCTCCGTCACCTACAACTGAA
 AACAGACCCCAAGCCGACCGCACTTCGACCTCGTCCAAGTGGAAACCGTCACGAGCCT
 GCGGAATAATCCGACGAAGCATGACGTGTCTATCTTTCAATACCTTACCGGACAAAG
 TAAGGTATTTTATTTTCAGACAGCATTTAAAAATGTTATTGCAAAACATCCTTCCATT
 GCCATTGGCTTTTGGGGAAGGCATTTCCGAAGGTGGCAATGCTTTGGACGGCAGCCG
 35 GGCACCGGACACGACACCTTTTCCTCGCAAAACCGCAGGCATCCGGGGGAAAGTGTGG
 GCATTGCATCCAGCCGCAAGCCCTGAACAAACCCGATGCCGCTCTGCAAGGAGCAGGT
 TACGAATATGACGGCTCATCTTGGACGACATGAAACCTGAAGCAATATATTCAAAG
 CCGCTGGATGACGCAATTTCAATTTCCGGCTGGCTGCCCGGCGGGGACAAAGCCTTACC
 ACCCGACGGAACACAGCATTTGCCGCCCTTTTCGCCACCTTATCCCTACTGAAAGAAAC
 40 GGTATGCTTATTTGCCGTCTCTATCCGGACACGAAACCGCAACAGGAGGACGAAGCA
 ATCGAACAATGGGCAAAAACTGCCCTCAAGAACAGTTTGGCGTTTTCGCTTACGGCTTT
 ACCAACCGGAAAAACAGCCACCTATCTTTTGGTATTGAAAACTGCGTCAAAAAATAA
 CTGTTTGGCGTAAAAATAGC

45 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 325>:

gnm_325

TTGGAAAGCCTTCTGCAAAGGT CAGGACACGCTTGGCGGCATTGCTGAAGACGAGCCGACC
 GGTATGCCGGTCCGGTGTCTGCTGTAACAATACTGTGTCGCGCTGGCATACCCGAAAGCC
 5 TTTGGCGGCGCTGCGTGTGCGAACGCCGCTGCTGATTACTTCTCCGCGTTTACGAGCGTT
 CATCAGGTCCGCATCAACAGTGCATCAAAAAATACGGCGTACAGGGACAAATGCGGGCTTG
 GAAACAGTGTATTGCACATCTTCTTATTATCGGCGGAACGTGCGCTCTTTGATTCAA
 AATCTCAATAAAACGGAATGCCGCTCTGAAGATGTTGAGACGGCATTTCTATATCGA
 CGGTGAGGATTCTTTGCGGATCGGGCAGCAGGCTGTTCAACATAATGSCAAGTACGGCGCA
 CAAGCCACGCGCGCAAGCTGAAGCTGCCAATTGAGCGTCATGCCGCGCATGCCCGT
 10 GGTCAGTACCGAGTGCAGATGACCAGGTTTTTCGGCAGCATCAAATCGACTTTGGCATC
 AATCAGCGTTTTTCAGCCCAAAGAAGCAATCGTGCCGAACGACGACGATCAATGCCCGC
 CATTACTGGCATCGGAATGGAAGCCAAACCGCATGAAATTTGCCGAAAAACGCCATGCA
 GACGGCAAAACCGCGCCCAAGTCATGATGACGGGGTTGCTGTTTTTGGTAATCATCAC
 CGCACCGGTACTTCGCGTAGGTGTAACCGCGCGGGCGCGATCAGACCCGCAACGCA
 15 TACGCCCAAACCGTCCGCTGCAAGGGTTTTGTCAAAGCCCGGGTCTTCGTATAGTCTTT
 CCCCCTCACATTGCCGATTGCCATGATGCCGCCGATGTGTCGATGGCGGGGCGACGGC
 AACGGTCAGCATAAACAGTGCAGCGCTGCCAGTTGATCTGAGCGTTTTCAAAATGGGGAAC
 GGGCAACGAGGGCGCGTGTGCAATGCTTGCCGTTCCACCAGTCCCATCAGCAGTGCCRA
 AACATAACCCGAAGCGACACCGATCAAGATGGGAATCAGCTTCATCTCTGTCGCGGAA
 20 AACCGATACGATGGCGTAACGGCAAGGTAAAGCCGGAAGATCAGCGAATCGGTATAG
 TCGATGACCTGTTTCCGCTCCGCTGCACATTCGCCA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 326>:

gnm_326

25 AAAAAATGGGTGTTTTACCAAAWTTTAAGGGGAATTTTAAACAAATATTAAACGCTTAC
 AATTTGCCATTGCGCATTGAGGCTGCGCAACTGTTGGGAAGGGCGATCGGTGCGGGCCTC
 TTCGCTATTACCGCAGCTGGCGAAAGGGGATGTGCTGCAAGGCGATTAACTGGGTAAAC
 GCCAGGGTTTTCCAGTCACGACGTTGTAAACGACGCGCCAGTGAATTTGAATACGACTC
 30 ACTATAGGGCGAATTTGGGTACCGGGCCCCCCTmGAGGTGCAAGGTTATCGATAAGTTGA
 TATCGAATTCCTGCAGCCCGGGGATCCACTAGTTsTAGAGCGGCCCCACCGCGGTGGA
 GCTACCAAGTTTTGATTACCTTATAGTGACGGTTAATT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 327>:

gnm_327

35 TTGAAGAAATATGCAGGGGAGGGTATATGCGGATTTTTACTTTCAGCTTAATGTGImTCA
 AATCGGGTGTGGGGTATGTATAGTGGATTAATTTAAACAGTACGGCGTGGCTCGCCT
 TGCCGTACTATTTTACTGTCTGCGGCTTCGTGCGCTTGCTGATTTyGTTAATCCAC
 TATAAAAAGCCGATCGTGAAAAGATGCGGCTTCAGGTATCGGTGATTAATCTTCAGA
 40 ACCGGTGAAGGACGGATGCTGACAGTTTTACGGTTACGCGCGCTTTGGTTTTGAATCT
 GACATAACCGTCAACTTTGGCGAACAAAGTGTGGTCTTTGGCCATACCTACGTTGTGCGC
 TGCGTGAATTTTGTACCGCTTGCGGTACGATGATGGAACCTGCGGGAATCAGCTCGTT
 GCGGTAGGCTTTAAACGCCCAAGCGTTTTGGCTCTGAAATCGCAGCGTTGCGGGTGTGCC
 GCCTGCTTTTTTACTTGCCATTGTAAATGCTCCTAAGTTTAAAGTTAGGCGATTTGCCAC
 45 GATTTCGATTTGGGTGAAATTTTGGCGGTGGCCTTGGCGTTTTTGGTAGTGTTTGGCGGG
 CGGCATTTTGAAGATGCGGACTTTTTTCGCCACGACCGGTGCCACTACTTTAGCCGTTAC
 TTTTGACACTTCGATAAAGGGTGGCGCAACTTTACAGATTCCGCGTCAGCAATCATCAA
 AACTTCGGTCAGTTCGATTTGGCTGCGAGTTCGGCTGCTATCTGTTCTACTTTCAATTT
 TTCGCCGACGAAACTTTTACTGTTTGGCGCGGTTTTACGACCGCGTACATCTACRA
 CTCCTAAGGGTTATGGTTAATATCCnGGG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 328>:

gnm_328

5 GTAAGATTACCGCTCTGGAAGACTGGGGTCGCCGCCAGCTGGCTTACCCGATTAAACAAA
TCCATAAAGCCCATTTACGTTTGTGATGACATCGAAACCACCTCCCGAAGTGGTTGAAGAGC
TGGAAACCGCATTCGCGTTCAATGATGCAATATTGGCTCATCTGACCATCAAACCAACAA
ACGCCGTTACCGAAGCATCCCTATGTGTGGGTGGTGAAGAGGCTAAGAACCTGTTGAGCG
GTGCGCTGAAGAAGCGGTCGCCCAATAATTGGGATTCAATAATCTTGTTTCGCTTGCCTG
CTTAAATTGAAGAGGTTTCCCTATTTCGATATACGCTGCCGGAATCCCTGTTTATGATA
10 TTATTTTAAAGCACGAATCGTGGCAGGAGGAAAACGGGCAGCAATGCCTTGTCCAATTGG
AAATTCGCGCACGGATTTTAGCGAGGCGAGGCGGAAGAGTGGCAGTATCGGCAAGGTGAT
ATGTTACGCTCGAAGGTTTTTTAGCTCAAAAAGCAGACGTTCCCTTATGCCGATGCTCA
GGATACAAAATATTCAGAATATAAAGGTTAAACGACAATGGCTCGTCAATCATTCAAC
GTAGAAAATTTCTGCCGTTTCACGGCTGAAAAAATCCAAAGATCGATTACAAAACAAAGTTG
15 ATTTGCTGAAAGACTTCATCTCCGAARACGGTAAATCATTCTGCACGCATCACAGGAA
CGAAGGCATTTCACCAACGCCAATTTGGCTGTTGCCGTAAAACGGCAGCTTCTCGGCTC
TGCTGCCTTACACCGACCAACACAAATAATTTGGAGATTGAATCATGCAAAATATTCTCTG
TTAGAAAAAATCGCGGCTCTGGGCACTTGGGCGACATCGTAACCGTTAAAACGGCTAC
GCCCGCAACTTTCTAATTCGCCAGGTAAAGGCAAAACGTGCGACCGAAGCGAATATGAAA
20 GAGTTTGAAGCACGCCGCGCAGAACTGGAAGCAAAACAGGCTGAAATTTTGGCAGATGCC
CGATTCGCTCAGGAAAAATTGACGGTCAAAACCGTTACCGTTGCTCAAAAAGCTGGTGTG
GACGCTCGCTGTTTCGGTTCCGTTACCAATGCCGACATTGCTGCTCAATCGTTGCTGCC
GGCATCGAAGCCGTGAAGCAATGTACGCTGCGCAACGGTCTCTGAAAGCCGTTGGC
GAGTACGAATGGAAGTGCGCTTTGCA

25

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 329>:

GNMND42TR gnm_329

GGAGCGATGTAGCCCATTCGCGGAGGACGGTCGTCATACCGCGCTTGCGCCCCGCGCTGT
ATATCGCGTTCCGCGCTCGCCGACGTAGAGTGTGTGTTGCGGGTCGGCGTGGATTGTCCG
30 CACGCATACAGCATGGGTTTGACGCTGGGCTTGGGCTCGCCGAGGTGTCGCCGCTGACG
ACGACGGCGGGTGGGATGATGAAGCCGACTTTGGGGACGAGTTTGTCCGTTGAAGCGCATG
GGTTTGTGTTGATGATGCCCATTTTGTATGCCGCGTTTCCGAGTTCGGCGATGAGTTCG
TTTACGCCGCTCGAAGAGGGTGGTGTCTTTGGCGTAGCGGCTGCTGAATCCGCAAGGAA
TCCGCTGCGCAATCGGCGATAGTCGGATGGTCGGGGTGTATGCTTGCCTCGAGCTTGTAT
35 CAGTCTTCCGCGCGCGTGGCTGGCTGGGTGCGGATTTCGTCATGCTTTTTCGAGGTAG
TCGCTGCGGGCGAGCAAGGTGTTGAGTGCGCCGCCGAGGTCTAAGCGGTTGTCGGCGAG
CGTGCCATC

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 330>:

40 gnm_330

ACGAGCCGAGCAACCATTTGnGATATCGACGCGATGAATCCGCGGCAAGGTTTGCTGA
TAGCAGACGAACACACGCGGACATCAAGCTGTCCGCTTGAGGCGAGTCCGCGCGAATAG
CTGTAGCGCGCGCGGAAGAGCGGCTGTTTTTGAGGAATTCGGGATCGCGCGGATTTCGCC
AGGCGTATATGGCTGTCTTTGGCGTGATATCACCCTCGGGGCTCTTTGGCAAAATCCGGT
45 TGGTCGGCTCTTTTTCGCGTCCATCGCGCACCGCTGTATTGCGCCGCGCCAAAATG
TCGGTTTGCTCTTGAAGCGCGCTCTGTCCCAAACTCGACAAAGTGGCGGATAAGGCGG
ACTGCTGATAGCTCGCGTTTTTCGCCCACTCCGGTTGCTGAGGCTGTGGCGGCCACC

CCCGTCCACAAACCTCGTCGGCAGTTTGGGATCGGAACTTTGGGGTTGCCCGTGCCG
 TCCTTGAAGCCCCAACAGTTGCGCGCGCCATCGCGCCGGTTTCGGATTTGGGCTGCCAC
 CCGTCGATACTCCAACGGATAACGGCGGTTTGGACGGTGTGTTTATGATGTCGCGCAGG
 CGGCTTGGCAGGTTTCGGGGGTGAAGGCACAGATTTCGAGGCTCAAAATCGCCGTGCGACC
 5 AGCTTTTTTTCAGCTTATCGTTGAGAAAGTCGGCATTTCCTGCAAAATGAATCGGTTT
 TGTCTTTGATCCGAACCGCGCTCAAAACAGGCTGTCGCCACCCCCACGGTAAACGGTCA
 ACCGTGCGGGTTGAAGGCTTTGCCAAATGCCGTGCGCGCTGGCGGAAGTTTGTCGT
 CGCGCTCTTGGTAATCGCCGCCCTTGGTGAGAACTCGATCGCGGCGGT

10 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 331>:

GNMDO70R gnm_331

AAAAACAGGTTTGGCATCCTCCAATAAAGAAGCGCGGCTTTGCAAAACAGCCCAAG
 GTAAGGGGAATGGCAATATTCAACAATAAAGGACAAAGACAGGGAACGCAAAATTTATC
 TATAATAAAGCGGCGCGGGTGAAGGCTCTGTCTTTTCGACAATACCGATACCTTGT
 15 TCCGACAAAGCGTACTGCCGTTTGGCACAGCCACCTACCTGCCGCCCTACGGCAAG
 GTTTCGGTTTGTATGCCGACGGGCTGAAGAGCGCGGCAATGCCGTTAATTGGATTTCAT
 ACGACCCACCGGGTTGATAGGCTACAGCTACACCATGTGCGTATCGAGAGACAGCACA
 GGTCTGCCAAACTTGTGCTATAAACCAGATTTTCCTTCGACAACACCGGTTTGGCGAAA
 AAATCGGGCAGCTGGATAGGCACCGGACCCAGCCGCGAARAATTGCCCATTTACAA
 20 ATTGAAGAGTATCATCGTTGGCGTGCTCTTCAATTGGGACAGGAGAATACCGCTCAA
 AATAGGCAACTCATCAACAATTCATATCTCTTTAGTGAGACAATAATAATC

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 332>:

gnm_332

GCCGGCGCGGAAGAGCGTTTTCAAAGTTCAAATGGAACGTTGCCGCTkCAAaWAmAG
 CrAkTGTACACCGTCAAAAACGTATAGTGGATTAACAAAAATCAGGACAAGGCGACGAAG
 CCGCAGACAGTACAAATAGTACGGAACCGATTCACTTGTGCTTCAGACACcTTAGAGAAT
 CGTTCTCTTTGAGCTAAGGCGAGGTAACGCCGTACTGGTTTTGTTAATCCACTATAACG
 30 CAAGCACCGCAAAAGCCGCGCCACCCCTCTCCCAACCTTTTCAGACCGCATTTTCGGTA
 ATCTGCTAAAAATCGCCCGCTTGGATTCCACAGAAAAATCCGAAAAATGAATATTTTTC
 CAGAAGATCCGGCAATTCAAAATCGCGCCATCATCCAAAAAACCGATGCCACCTACCA
 AGTCGATACCCACACCGGCAACGCACCAAAGTGAAGGCGAACAACGTCTTTGCCGAGTT
 TGAACGCGATATGGCGGCGTTTTTGGAAAAACGCGCAGGCGCAGGCGGCGGACATCGACAC
 CGATTTATGTGGGAAGTATGCGGCGAAGAGGAATTTACCGCGGAAGCATCGCCGAAGA
 35 ATATTACGGCCATGCGCCGACCAAAACCGAGCTGGCGGCAACTTTGATTGCGCTTTACGC
 CGCGCCGATGATTTCTACAAAAAGCCAAAGGCGTGTCAAAGCCGCGCCGGAAGAAC
 TTTAAAAACAGCACTTGCCGCCATCGAA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 333>:

40 **gnm_333**

TGGGCAGAGAATTGTGTTTCATGTCGGCATTGATTTTTCTGTGCCATTATCATCTGCTGT
 TAAAAGAGTATTTCCATTTTGACGTGGTTCTGAGAATACTGAATGGGTATACTCC

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 334>:

GNMDQ93TF gnm_334

CCCCCTAAGAAGAAGGCCAAAAGCGATTTACAGATCAAATGGCAGCAGAATAAACCCATAC
 GGTTCAGTATCGGTATAGATGATGCGGGCGGCAAAACGACCGGCAAAATATCAAGGAAATG
 TCGCTTTATCGTTTCGATAACCCCTTTGGGCTTAAGCGATTTGTTTTATGTTTTCATATGGAC
 CGGTTTGGCGCACAAAACGGACTTTGACTGATGTGTGGACGACTTAAACTGAAAGCGGGT
 5 CCGAAGATTACAGCGTGCATTTATTCGTTGCCGTAATAAAATGGCTGTTTTCTTTAATC
 ACAATGGACATCGTTACCACGAAGCAACCGAAGGCTATTCCGTCAATTACGATTACAACG
 GCAACAATATCAGAGCAGCTGGCCGCCGAGCGCATGCTTTGGCGTAACAGACTTCATA
 AAACCTTCAGTCGGAATGATATTATGGACACGCCAAACCTATAAATACATCGACGATGCCG
 10 AGATCGAAGTACAACGCCGCCGCTCTG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 335>:

gnm_335

CCTGAAACGCTGGAAGCCAAAATGCTGACCGGCAAAATCCGGTTACGATTTGGTCGTGCCG
 GGCATCGCTTCTCTGCCGCGCCAAATCGAGGCGGGCGCGTATCAAAAAGTCAACAAGACG
 15 CTGATTTCCCAACTATAAAACATCGATCCCGAAGCTTTGAAAATGCTGGAAACCGCCGAC
 CCGGGCAACCAAGTATGCCGTCCTCTATTCTCCGGCGTGAACACGATTGCGATTACGGCG
 AAGGGCAAAAGAGCTTTTGGGCGGCAAGCTGCCCGAAAACGGCTGGGATTTGCTTTCAAA
 CCGCAATACACCACAAGCTGAAATCCTGCGGCATCGCCCTGTGGGACACCCCGAGTGAA
 20 ATGTTCCCGATTTTGTCTGAATCTTTGGGCAAGAGACCCCAAGGCTCGAATCCTGAAGAC
 TTGAAGGCGGGCGGGAAGTGTGAAGTCTATCCGTCCGGATGTCAAAAGTTCAGCCCG
 TCCATCATCGACGAGCTGGCACGCGGGGACATCTGCCTGGCGCAGGCAACGGCGCGCAT
 TTGAACCTTGGCGAAAGCAGCTTCCGAGGAAGTGAATAACAACGTCGCGCATCGAAGTGCTG
 25 ACACCGAAAGGTATGGGCTTCTGGATTGAGTCTTGGCTGATTTCCCGCCGATGCGAAAAAC
 GTCGCCAATGCCCAAAATACATCAACTACACGCTCGACCCCGAAATCGCGGCGAAAAAC
 GGCATCGCCGTAACTTTGCCCGCGCAGCAAAACCGGCGCGCAAAAAATGCTCGCGAG
 CTGGTGAACACCCGTTCCATCTTCCGCAACGAGCAGGATATGAAGAAGCGTTTCGTGATG
 CGCGAATGAGCACGGATGCGAAAAAACTGCTGTGACGCTGTGGCAGAAAATCAAAGTC
 GGCACCAACTGATTTGAAGCATTAAAAATCGCGTCCGAAACGATGTCGCGACGGCATTTTA
 30 TATTGACTTGAATAGAAATATTTATATAGTGGATTAAACAAAAATCAGGACAAGGCGACA
 AAGCCGACAGACGATACAAATAGTACGGAACCGATTCACTTGGTGCTTCAGCACCTTAGAG
 AATCGTTCTCTTTGAGCTAAGGCGAGCCAAACGCGTACTGGTTTTTGTTAATCCCATATA
 CCGTCGTTCCACGGTCAGGATTTGAGATTGCGGACATCTGTCAAGAAAGACAAAAACC
 TTCCGCGCATTCCTTACAGGCGAGATCCGATCCGTTGAAATTCGGTTGTTTTAAATA
 35 AATTCTTGCAGCTTTGATTTTCTGTTTTTCCGATAACGCCGTAACCTTTGAAACGCGAAG
 CGGTAATCCGATCCGTTGGGATTTTGCAACTTCAAACTCAATCCGCAAACTGAAATCCCGT
 CATTCGCGCGAGTCGTGAATCCGAACGCGTCCGACGAAAAACCTGCATCCCGTCATTCC
 CACGGAAGTGGGAATCTAGGACGTAATACTCAAGAAACCGTTTTATCCGATAAGATTCC
 GCACGCACGACCTGGATTCCCGCTGCGCGGGAATGACGAAATTCGGCGAGCCGTAGG
 40 GTGGGCTGTAAAGTCCGGCTCCAGCCGAAATGTTTGGCGTTGCCGCTTCCGCGCGGAC
 TTCAACAATGGCTGCG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 336>:

GNMDS61TR gnm_336

CTTAGATCTCATACCATGTCATTGTGACTTACCTCCAGGAAGCTTCTCACTCTGAGAA
 GCGCCCATTTATTTGTTTTTCCAAGATGCTGACTGGTAATATTCTAGGAAAAATAGA
 45 AATGATTCTACTTTGTTGCTATAAATTCATCGTCTT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 337>:

GNMDV66R gnm_337

CTTCAGGGTACTTTGAATTTTTTTTCAATATATCTGCCATATGTTTTTGTAGCCGAATT
 5 TTTAGGAATACCAACCAACGCCAGGAGTATAAAATGATTGAACCTTCAACTTCATGAATT
 GAAGCTGGTTTCAGGGGAGGTCCTGTACAGACAATATAGCTGAAATGTAGCTAATGC
 TGCCCAACCAAGGAGGTCACACATGGGGGATTGGTGCATACCTGCTGCCGAGC
 GGCAGTTTATTATCTGCCGAAAAATGCTTACGGTGTCTGGTGCAATGGTGATACAA
 10 TGTGACTCGTAATTGGGTAAATGATGCCGTTAATGCACCTCCTTATAACGGAAGACCAAT
 CTTTGAGATTGAACATGGATTAACTGCTCCCGCACAAGCAGATAAATCAGGGAACGG
 CTACACTGACGGTACAGATTACTGCTGATATTCTCATCGTCCAGACAATCTCTAGGGGT
 CGTCTGAACCTTCTTAACTCAATTTTATGAATAGACCCAAGCAACCTTCTTCGCTCC
 CGAAGTCGCGTTCGCCGCAACACAGCCTTTTTTTTTTTTTTTTTT

15 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 338>:

GNMDW68F gnm_338

CCGCGGATTTCTCCTCTTTTAATATAGTAAATTCATGACCCCTATGGGATTTTCAGG
 AATATGCTCTTTATCTTCATAAGCCTCGTAATCAGATAGGCAGATGGCATTTTTTAAC
 CCCGTAAGTGAGCAATCTTTCTCCCATAGTCGTGCTTAACTACACGCATCTTTTCGGAT
 20 AACAAATATCGTCCACGCTATCCAAACCGTCGCGTAGAAATGGATAAAGTCGCTTTGT
 TTGCTGGATGTATGGCTCGAGCACCCAGCCTTG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 339>:

GNMDZ09R gnm_339

TGGAGTACCGCAGAAGAAATCTGGGCATTGCCATTTCAACATATCGCCGCGGCTTTGC
 CGCTATACCACATAAAGGGCAGGGACGCGGCAAGCAGCCAGTGGAAAAGCGGGTGGGA
 TGTCCAGACTTTGGTTTTGTTTTTATATATCGGTTTCCGGCGGTAGAATCGGTTTGT
 TCGAGCCTTATTTTAAACGATTGGAGGGCAATGTTCCCGTTTTTCATCTTTTCATGCGA
 30 GAGCCCGCCGACAGATGCTTCAGACGGCATTGCGTTTTTCCCATGTGTTCAAGCCCGTGC
 GGAAGATTTCGACATAGGACTTTTCGACACGCTC

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 340>:

GNMEB54TFB gnm_340

CCTGCCCGGTGCTGGAAGGTTAATTGAAGATGTGAGAGCATCGGATCGAAGCCCCAGTAA
 35 ACGGCGCGCTAACTATAACGGTCCTAAGGTAACGAAATTCCTTGTGCGGTAAAGTTCGA
 CCCGACGAATGGCGTAACGATGGCCACACTGTCTCCTCTGAGACTCAGCGAAGTTGAA
 GTGGTTGTGAAGATGCACTTACCCTGCTAGACGGCAAGACCCCGTGAACCTTTACTG
 TAGCTTTGCATTGGACTTTGAAGTCACTTGTGTACAGATACGTGGGAGGCTTAGAAGCAG
 AGACACCACTCTCTGTGGAGCCGTCCTTGAAATACCACCTGGTGTCTTTGAGGTTCTAA
 40 CCCAGACCGTCATCCGGTCGGGACAGTGCAAGGTAGGCATTTTGAAGTGGGCGGCTCT
 CCTCTCAAAGCGTAA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 341>:

gnm_341

```
5 CTCGGTACCCGAGCATTACGAATTCGAGCTCGGTACCCCTGCGACAGGGCGGCAATCAGGC
GGTTGCGGCGCGGAAATTGCGGCGATACGGCCGCGTGCCGATGGGGAATCGCTGCACAA
CTAATCCTTTTTCGGCGATTTCATAGGCAAGGTTTGTGACCGCGGATAAATCGCGTT
CTATGCCCTCCCCACACGGCGATGGTGCCGCTTCTGCTGCAACGCAACCTGATGGG
CGGCGGTATCGATGCCCGAAGCCATACCCGACACAAAGGGAATGCCTTTCCACCCCAACG
ACTTGCAGAAATCTTGGCAATCCGATCCGCTCGCGCGTGGCATGACGGCTGCCGACGA
10 TGGCGGCGGAAGGTTTGTGCGAGCAGTTGCACGTTGCCGCGCAAAAACAAAACCGGTGGCG
CGGTACGCCCCCTCGCTCAGCATTTCGGGAAATCTTCATCCTGAAGCAGCATCAGGCGGCG
ATCCGTCaCGCATTTCaCATTCaCATTCaCGCCTTCTGCGGCTGCGCGCGCAGAGCGGTT
TTTCCGCAATTGCGCCAAGCCTCAAGCGCCTGTTTGTGCGCTATCAGTGCCGCCAACTGTT
CCGCCGGTGGCGCAAGGC
```

15

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 342>:

gnm_342

```
AAAACTCAGAAAAGCCTTGGCGGGCTTTTGGAAAGCACTGCCCAACCTTAAACGACACCATG
CTGCTGTTTACGGGATTGTGCTGATGAAATTAACCAATTCCTCCCGTTTCAACGCGCT
20 TGCTCGGTACAAAAATCCTGCTTCTGCTCGCTATATCGCATTGGGTATGATGATGATG
CGCGCCGCTCCGCGTTCCGACCAAGTTCTACACCGTTTACCTGCTCGCATGTGTTGCGCT
GCTGTCATCGTTTACCTTGCCAAAACCAAGTCTCTGCTTCTTGAACACCGTTATGAAC
AACAGACATTTTCCGCTCATCGCCCTGGGCGAGTAATCTTGAACACCTGCCCAACAGGTA
CGCGCCGATTGGACACGCTGTCGTCCTCCTGACATCCGCTTTAAACAGGCTTCCCTCA
25 CTGTATATGACCGCGCCCGCTCGGTACGACAATCAGCCCGATTTTGCTAATGCCGCTCGC
ACCGTTTCCACCACTCTGAGCGCATTGCCCTGCTTGGCGAACTCAACCGTATCGAGGCT
GATTTCCGACGCGAAGCGAGCTTCCGCAACGCGCGCGCAACATTGGATTTGACATTATC
GACTTTACGGCATCTCCAGCGACGACACCCGACTCACCTGCCGCATCCGCGCGCGCAC
GAACGAGTTTCTCATCCGCCCTTTGGCAGAAATCTCCCTGATTTGTTTTAGGAAAA
30 CACGGAAGGTTGCCGAATTGTCAAACGGCTGGGCAATCAAGGTATCCGCTCTTTTACCG
GACAGGTAAATCCGACGCGGATCCGCTCTGAAAGCCTTTCAGACGCGATTTTTCCTTTG
CCGCAACACGCGCTGCAAAAAAATCGCCCTTGGAAAAGGGGCGCAAAAGGAACACAAA
CCACTACCAAACTTTAAATCTGAAACACTGCGCTGCGCATACTGTATCCGACAGGATAT
AAAGCCCTCACTAAATCGTTTCGAGAAATCCAACTTCTTCATCGCGCAGAGAAATCTG
35 CTTTCTCCGGTACCAGCTCCAACAGAAACGGTTGAACCGCGGTATGACAGCTCTGCTTA
CACCGCCCAAGCTTTCTGGACAACGCGGACAGGGCGCGTTTGTAGGCATTATCCTTGCAG
TCAAGCTCCCGCGCACTGCCGACCCAGCTCAAACGAAGGTTGCGGCTTTTCATCCTCAATG
AGCAAAATGCTGTTTGTACTTCCCCACCTCGGGCTCGCATGAAGCGCAATATAATAT
TTGCGCTCGATGTTGACATACGCCGCTTATGCACG
```

40

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 343>:

GNMED25TR gnm_343

```
TAAGTTTCCGTACCGACAGACCTGGATTTCCCGGCTGCGCGGGAATGACGAAGCTATCCTT
TTGGCCGAGGTCAAAATCAGCCGTCACAGAGATTACCTGAATCAGGCGAATGGCCCC
45 GGCAACAACACTTCTGCGGCTGGGAACCTCTCTCAACATCCAAGGGAAATATGTTTAAGG
GAATTACAATCCAAACGGGGTCAATAACGGCAAAATGCCTTCAAGCCGGTTAACAAAG
AAATCCAAGGGAAAACTCCCC
```

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 344>:

GNMEE40TR gnm_344

5 AGTGCTTGTGTTGTTTGCACCGGTTGCTTTCGGATAATCGTGGGTAATGCGTTTCGGCGGC
ATAAGCTAAATCCGCCTGCACATAATACGGGCTGCGGCTCTTCACTTGC CGCCTG
CGCTCGGGAAGAGAAGAGAAGAGAAGAGAAGAGAAGAGAAGAGAAGAGAAGAGA
GAGAAGAGAAGAGAAGAGAAGGTTTTTTGGGGCTGGATTCAATTTTCGGCTCCGTATTCG
GTTTAACTGATTAAAAAGAAAGATTTTCAATGATGTTGCAGGAGCGGACTATATCACGT
TTTGCGCGATGTTTCAACACAATATAGCGGATGAACAAAAAGAGAACG

10

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 345>:

gnm_345

15 ACGGGACCTTTTGATGCTGATGCTGCTGGTCGGCACGGGTATTTTGCTAGCTGTTTTATTA
AAAGGTTTGCGAGTTCCACGATGTTGGGTTATGCGCTGAAACAGGCGTTTATGCGGCCAAAG
AAGCATAAAAGCGCGCAAGGCCACGAAGGCGATATTTCCCATTTTTCGGCGTTGATGACC
CGCTGTGTCGCCACCATTCGGCACGGGTAACATCGCCGGCGTGGCGACTGCGGTGGTAACC
GGCGGCCCGGGCGCGGTATTTGGATGGGATGACCGCATTTTCGGCATGGCCACCAA
TACGGCAAGGCGGTGTTGGCGGTGAAATACCGCGTCAACAATTCAAAGGCGAAATGTCC
GGCGGCCCGATGTATTACATCGAAAAAGGCTTGGGCAAAAACGGAATGGATGGCCGCTG
20 CGGTTTGGCGTGTTCGGCATTCGCTTCCCTCGGTATCGGCAGCTCGGTGCGATCCAAC
TCGGTTGCACAGGCGGTGCAAAACAGCTTCGGTATCGAACCTGCCTATACGGGCATTACG
TTGACCGTTCTGACTGCGGTTGTGTTTTAGGTGGTATTAAGGCATCGCCAAAGCCGCT
TCTTTCATCGTGCCTGCTATGGCGGTGTTTATGTGTTGGGCGGCTCTTCATTATCGCG
ATTAATTCGATGCACTGATGCTGCGCTCAAGCTGATTTTCCCGATGCG

25

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 346>:

GNMEG32TF gnm_346

30 AAAACGGTAAATCAATTCATACCTGAATACGTTCTGCGCCTGCCGGCTGGGAACAGGCG
CACGGATAATGCTTTGCCGAGTGCCTTTTAATAAACAATTCGGTTTAAAGTAACCCGT
TTCATGAGG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 347>:

GNMEI01TR gnm_347

35 TACCCGGTTCTTAAAGTTGAAAACGTCTCATTAGATATGCTGATAATGAGCCATATCTT
TTTGAACACATTAATTTGGAATTTAGAGATAATGAAGCAGTTGTTTAAACAGGACAATCT
GGTCGGGGGAAGTCCACTTTGTTAAACATTTTAAACAGTAGCCTAAACCTGAAACTGGT
ACAGTTAGTAATTAATGGGCATGATATATCAAGTTTCTCCATCCTTTATTAGGGGATTG
AGCGGGATGTTTCGCCAAGATGATGTCCTTTTTCAGGTTCTATTGGGGAAAATATTCA
40 TTTTTTGATGAAAGCCACATATGGAGCTCATTGAACAAATGTCACACGTGTGACACATA
CATGATCCATATACCTAACATGCC

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 348>:

gnm_348

AAAAGTTGATAAATGGTAGTCATATGGTCTCATAATTTCAAGCTTAGAAATAGTAA
 AGAATAGGGCTGTCTAGATACTAGCGAAATTCAAATTAAGTTAGAATTATCCnTATG
 AGAAAAAGTCGTCTAAGCCAGTATAAACAAAAATAAACTCATTGAGCTATTTTGCACAGGT
 5 CTAAC TGCAAGAACGGCAGCAGAGTTAGTAGGCGTTAATAAAAAATACCGCAGCGTATTAT
 TTTTCATCGTTTACGATTACTTATGTATCAAAACAGTCCGCATTGGAAATGTTTGATGGC
 GAAGTAGAAGCAGATGAAAGTTATTTTGGCGGACAACGCAAGGCCAACCGCTTCGCGGT
 GCTGCCGCTTAAAGTCGCCGATTTCGGCTTTTGAAGCGAAATGGTAAGGTTTATACGGTT
 ACAGTACCGAATACTCAAAACCGCTACTTTATTTCCATTATTCGTTGAACAGTGAAACCT
 10 GACAGCATTTTTTATACGGATTGTTATCGTAGCTATGATGTATTAGATGTGCGCGAATTT
 AGCCATTTTATGCTTCGCTGAAACTTCGTTTCGTATCAATCACAGCACACATTTTGCCGA
 ACAGCAAAACCATATTATATGGAATTGAGAACTTTTGAATCAGGCAAAACGTCATTACG
 CAAGTTTAAACGCGATTCCCAAGCGCATTTTGAGCTGATTTTAAAGGAGTGCGAATGGCG
 TTTTAAACACAGTGAGATAAAAGTCTTTGTTCCATTTTAAACAAATTAGTAAAAACAAGT
 15 TTGCTCTAGTTATCTAGGACAGCCCTTGTTTTTGTTCGGCGGG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 349>:

gnm_349

CACATCCGTCGCTGTGTCATTGTCAAAAATACCGTAAATAGATTGTATATCCTTTTTATC
 20 AACATCATCTCTCACTCAAACTACTGCCGATACCGACAGATAAACCAGCGTTTGTCTTTC
 AGTTTGAAACGCGCGCGGAGGTAAATCGGCTTATCCAGCGTGCCCTTTAAAAATAGTA
 CGTACAGACCATTTGGTCGGATCGTTGTTGCTCAAAATCAAAGCGGTACATATTCGCCGCG
 CGGTGCGCGGCATAGGCGATATGACCGGTGCCGTCAAAATCTTTATCCACCAACGTGGGG
 GACGAAAGCCCGCCCTTGCGCTCGGGTACGTTGATTGTTGCAATCGCGGTACCGTGTGTTG
 25 TTTTCCAAATCATACATACAGCGCGGTTTTATTCTCGCGGTGTTAATGTCTTTTAGTC
 GCATAACCGGAGGCGATGAAGGCGGCGTATTTGCCGTTGTGGGTTTTGCCGATTTCGCGC
 GTACCGACGCGTAGCCTAATTTACGCCATTGTGCTTTTTGACATCAAAATGGAACG
 CCGGCCGGGTGTGCTGTTGTCGATTTTGTCTAAATCCAAGCGGTATGCGCCTCTCGCGCA
 AAGCCCATTTGCGCGCAACATAAAGAAGTGTTTTGTCTGTGTTGTCATCTGTAATGCGGG
 30 CGCAAGACAAGCGCGCTCCACGCCATAGCGGTCGCCGCCACATAGCCTTTTCGGCAAA
 GTGCGCAGCTCTTTGGCAAGGGTGGAATTCGGTGTTTTGAATATCCTTTGCGCGCATCTGTG
 CCCTTTTCAGACGGCAGCAGCTTTTGGATTACCGCGAAGACGCGCGTGCACGATACAGG
 TTTTGGCTGCCGAAAGCTGCGCGGTGCTGACCGGCATCGGCACGGTGTGCGCGACAATC
 CCGGCTCAACGTCGCGCTTTTCCAATTTTGCGCAACCCGACGCACTGCTTTTAGACA
 35 CGCCGCTTGGCGCTGCCCGCAACAGCCATTGTTGTTACGACGAGACATCTCCGACCTACA
 TCGCCACACTCGAAGCAACGAAGACAGACTGCAACCCCTATCGGGAACACGCAACGCTCC
 GCATCTGTATGCGCTCTGAACCGGCAGACAGCAAAATCGACCTGCACCACTGATGCGCC
 TCCTTGCTGACGAAGGTTTTCGGCGAAATCATGGTGAAGCAGGCTCCGAATCATACATCCG

40 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 350>:

gnm_350

TCAAGGCATTTTTTTCGATTTTGATAGTCTGCAACTTGAACAAAAACCTACAATATTCT
 CAAATTCGGCAATTCGCCATCAAAATCGCGCAATCAAAATATAAAAGGATGTCCCT
 CGATGGGCATATCGCGTATTACTTGTTCATCCATAACTTGAATTCACTTTAAATCAATAG
 45 ACTGAGAGAAATAAGCATTAAATTCGAAATCCATAATCATCATCTCTTTTATGATT
 TCACATAATTATCTTCTCTTGGCGTCAAAACGCTCTTTTAGTTACCGCTTTTATATCAAA
 AATACCGCTGTAAGGCGAATATCGTTTCAGACGGCATTTTACTGCTTTTAAAGCGGGGGC
 AGTTCTACAAACGGAAGAAATGCTGAAATTTCTGATAAATTCAGGATGTTCTCTCAAA
 GCTTTAATGCTTTTCTTTTGAATAGCGGATCATAGACATCTATCCCCTTAAGAAG

5 GCAATGCCGGTCAAGGCATTTTTTTGGATTTTGATAGTCTGCAACTTGAACAAAAACCT
 ACAATATTGTCAATATCGGCAATTCCCCaTCAAAATCCGCCAAATCAAAAAATATAAAAG
 GGATGTCCTCGATGGGCATATCGCGTATTACTTGTTCATCCATAACTTGAATCATTTTA
 AATCAATAGACTGAGAGAATAAGCATTTAATTGCAAAATCCTAAATCATCACTATCCCTTT
 10 TATATGATTTTCCACATAATTATCTTCCTTTGCCGTCAAACGCTCTTTTAGTTACCCGCTT
 TATATCAAAAAATACCGTCTGAAAGCCGAATATCGTTTCAGACGGCATTTTGACTGTTTAA
 AGCGGGGGCAGTTCTACAAACGGAAAGAAATGCTGAAATTTCTGATAAATTCAGGATGT
 TTCTCTAAGGCTTTTAATGCTTTTCTTTTGAAATAGGCGGATCATAGACATCTATCCCC
 CTTAAGAAGGCCAATCGCGGTCAAGGCATTTTTTTTCGATTTTGATAGTCTGCAACTTGAA
 15 ACAAACCTACAATAATTGTCAATATCGGCAATTCGCCATCAAAATCCGCCAAATCAAAA
 ATATAAAAGGGATGCTCTCGATGGGCATATCGCGTATTACTTGTTCATCCATAACTTG
 AATTCATTTAAATCAATAGACTGAGAGAATAAGCATTTAATTGCAAAATCCTAAATCATCA
 CTATCCTCTTTATGATTTTCCACATAAATATCTCTCTTGGCGTCAAAACGCTCTTTTAG
 20 TTACCCGCTTTATATCAAAAATACCGTCTGAAAGCCGAATATCGTTTCAGACGGCATTTT
 GACTGTTTAAAGCGGGGGCAGTTCTACAAACGGAAAGAAATGCTGAAATTTCTGATAAA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 351>:

GNMEI43TR gnm_351

20 TACCCCTCAGGATTGGCATATGTATCCCGATAACCAATTTCTCCAACAACCCCGACTTTGTG
 GACTCCTGGCGCCACATGGGGTTGTGGCACCGCAGAGCTGAGATTTCATCCGCGCATC
 GCTAAGATTCTCTGCGACGCACGGGTTAAGAAAGGCCAATACGCTGCAGCCTATTCGCGG
 TCAATTTATTAAGCTTCCTATCAACCTCCCATCTCGGTTTCGCATCAACACAGGCTTAG
 CCTTAGGTATACCGCCCCCGATTACCCCACTGAACAAATCTATAGAGAATGAACAT
 25 ATTCGCGAGCTGCTCCGACAGCCCACTGCTTCAAGGCCTGAACCCGAATCGTCGGTC
 GTTGCTCGCTGGCTTTTTTCCGAAGTTTTTCGTCCAGTAATGACATGATCGTAGGAAG
 ACGTTACACCAACCAAGCGGCGGCACAGCCTAAGCCGAAAGTCTCGGCACAAGATCCGC
 CTCGCGTACTCTGAAAGAACCAACCCCAACTGCCGGAACGATTTACGCCCGGGGTG
 AGATGTAGCGGTGCAGGATACCTTTGTCTCCCTATCCAGCTTTTCGTATTCAGCCTTCA
 30 AATAAGAGGCTACTAAATCAGGATGTTTAGTTAGGTAATATAAGGATTCCTTTTTTAAGT
 CCTTAAACCTACTGTCAAGCGTTTGCTCGGTAAATTCGATAATGCGCTCCTATATTTT
 GACGACATTCG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 352>:

GNMEI51TR gnm_352

35 TCATACAGTTTCAAAATGAAAAATGATACGTTCACTTTGGATTTTAGTGGTCTTGTCTCA
 AGCATTTAACCATGTCACAGAAGCTAATCCGCAAAAGCTTTTGTGGATTTGGCCGAGAT
 GCTTGCATATGGCAACTTCGTTCTTGGTATGAAGGCGGAAGCTAATGACCGATTATGT
 GGAGGAGGATCACAAGCAGGTAATTTGAAGATTACAGAAAGTGTGGGTGAGGAGAC
 40 CGTTGCATTATTAGCTAAAAATCGGGTACGCAAGCAGATGATATCCTGCACAATGTATG
 CTTTGGTCATAATAAAATGTTCTTTATATGGCAATCACAGGAAC

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 353>:

GNMEJ36TF gnm_353

45 CCGCGCTTGAACGTCGCTTGCAAGTACTACAGAAAGAGTGTTTCAAACTGCTCTATG
 AAAGGGAATGTTAGTTCTGTGACTTGAATGCAACATCACAAGAGTTCCTGAG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 354>:

GNMEJ53TR gnm 354

[illegible]

The following partial DNA sequence was identified in *N. meningitidis* <SEO ID 355>:

10 GNMEJ56TR gnm 355

15 CCAACGTCGCATCAACAAAGCCACCGCGCGGCATCCGCGCCTGGTATATATGTGTGAAGCT
GTCCGGTTATTACACGGTTAAGAACCTTTACCTCCCTCGCTGGCGGCTGTACACACTCTCT
CAACTACCGCTATGTTACTTGGGAAATGTGCGGAAAGTGCCTGGCGGGCGACTCAACCA
ACACACATATGTCCGGCTTTACACAGCATATGCCCGCCCGCTCGCAACTACACATTTAG
CTTGGCAATGAAGTTTAAACGCTCAACAGCCGAAATCGGCTTGTAAGAGGCTTCAGACG
CGCACTTTTACACAACTCCCGCGAATTTTCATCATCCCGGATACACCGTAATCTCTCGAAAC
CGCTACTCCCGCGCGGGGAATCCAGCTCGCTGGCTTTCGGTTTTTGAAGTTTCG
GGTAACTTCTAAACCGTTATTCCCGCGAAACAGCAATGTAAACACAGAAACTCTCAAGTCC
CGTTATTCGGCATCAGACGGGATTCAGCGGTAAAGCTCAAAA

The following partial DNA sequence was identified in *N. meningitidis* <SEO ID 356>:

GNMEK63TR gnm 356

CGCCGCATCGGGCAATTGTCCTTTTTTCAGTCCGGCTTCGAGTTTGTGCGGATGCAAGTTT
 25 CAAGAGTCTGTGCTGTGTCTGTTGCCATAAAGGGCAGTTGTCCGGAGGTGGATTTTGT
 TGCCAGTCTCTTAAAGAGTTGCCGAAGCTGTTTTGCGGTAACGTGTCGGTTGAGGGC
 GGGAT

The following partial DNA sequence was identified in *N. meningitidis* <SEO ID 357>:

GNMEK86TFB gnm 357

30 TCAGCATCTAGTGAATCCGCGAGTGGCCCTCCATACAGAACCCGGATCACTATGTCTC
GCTTTGCGACATGCTCGATGCTTCGGTCTGCGATGTAAGTCACTTTGGCATGCACTA
TCAGTCCGAATTCCGACCGGAATAGGTAACTTTGCAACTCTTCGCTAGCTTTGGGAAG
GAGCAGCGCCCGAGTAACTGCTTACCTGACACGGTCCCGCAGCCGGATGACGGGTCTGG
35 GTTAGAGACCTCAAGAACACCAAGGGTGGTATTCAAGGACGGCTCCACAGAGCTGGCGTCT
TCTGCTTTAAGCGTCCCAACTGTTTACATCAAGTAGACTTCAAAGTCAATGCAAGAGCTA
CAGTAAGGTTTACGGGGTCTTTCCGTCTACGACGGGGTAGATGCATCTTCACAAACCAC
TCTCAACTTCGTGAGTCTCAGGAGGAGACAGTGGGCACTGTTAGCGCCTTATGTCGGGG
TCGGCAACTTACCCGACAGGAATTTCGCTACTTAAAGACCGTTATAGTTTACGGCCGCGGT
TTACTGGGGCTTCGATCGAGTCTCTCAAACTCTTAACTTAACTCTCCAGCACCGGGC

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 358>:

-740-

gnm_358

CGCGCAATGCCGCTCTGGAAAAGCGGATACCGCCCTGCTGTTGTACGGGTGCGGCTCTAT
TTGCGCCGTGCGGCAACTTTGGCAACTTTGGCAACTTTGG

- 5 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 359>:

GNMEL61R gnm_359

CCCGCAAGTGGCGAGGGGGCAAGCAAAGAGCCGAAAGACAGGGGGACCGCAGACAGGGG
CGAAAGCAGGAGCGGGGAGGGGAGGAGCCAGGGGGCGGCAACAACGGAAGCCGAGGGG
GGAAGGAAACGGGGCGCAGCGCGCCGGGGAGCGAAACCGCAGGGGCGAGGGCAAAGAA
10 CCGGAGAGGAAGACGGGGAGCAGGGCAGAAAAGAGCAGAGAAGACAGAGCGGCGGAA
GCAGAGACAACGGGGGTGAGTGTGGGACGGACCCAAAACCGGGGGCGCTGGGGCGACG
AGACGGAAGGCGAGAAGAGGGCCAAACGGAAGCAAAAGCACGGGAAACAGCAGCCAGACAA
GCCGGGGGGCGGAGGGGGGGGCCAAGGCCGACAAAGCTCGGAAAAGAGAGCCAAAGACAC
AGCGGCAAGAGAAAAAAGGAGGAGGAGAGCGGGGGGGCCAGGA

15

- The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 360>:

GNMEN01TR gnm_360

CCAAATGCAGGATCCGAGCCGAGTATGCAACCTACACCACAGCTGGCGGATTGCACAAAT
TGAACCTGTGATGCTGGGTGATGAAGCGCACCATTTAAACGCGCAAAACCAAGGCAAAA
20 AACAAAGCGAATTAGATTTAGAAAAGGAAATGAACGACCGCACAGCAATGCCGAATTTG
AACCTAAAGGCTGGGAGCATATGGTTTTTGGAAATTGTTACTCAATAAAATGGCAATCATA
GCCAAATATGCTGTTGGAATTTACCGCCACGCTGCCTGAAATGCCGATGTACACAAA
AATACGCTGATAAAATCATCAAAAATTTGGCTTAAAGAAATTTTGGCAAAAAGGTTATA
CCAAAAGAAATCAATTTGGTATCCAGTACGCTGGGTAAAGAAAGCGAGTGTATACAGCTT
25 TATTGTTTCTGGTATCGACATCGAATTGCGTTGAAATATGGCATTGCCAATTTCAAGC
CTGTGATGTTGTTTGAAGTAAGACGATTGATGAATCAAAAGCGGATTATCTGGCAATTT
TAAATTTGGGCAGAAAATGTGCAGCGCGTTGATTTTTCGTTTTTAACTACATTTTCAACAA
GCTTGAACGATAGCGATAGCGATAACGCCAACGAACAGGCAAAACCCGCACTGAACAAAG
CCCTAAATTTTATGCAGGAAAAAGCGCTTGAGTTTGCACATTTGGCAGATTTGGGTAAAC
30 AGA

- The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 361>:

GNMEP25IE72 gnm_361

TTGCGCATTCTCTTAAATACCCGTGTATCGCTGTAAATCTTAGAGATGGCGGAATATAG
CGGATTAACACAAGGCATTACTGCAATGCTCAGGATTCCGGTACAGGGTCATCGTTGCAC
35 ATTTAGCCAAACGGCCGTGACCGGATTTCACGGCGTTTCGGTGCGCCCATGCGGCCACCT
CGCCGGTAGAGTAGCGCGGAAAGTTGTAGTGCAGCATAAAGCGGTTCGGTGTATTTCGCCGG
ACAGCGCTCGATGATTGCTCGTCGCGCAAGTACCCAAAGTTGCAACGGGCCAAGCTT
GGGTTTCGCCACGGGTAACAAATGCAAGAACCGTGCCTGCGCGGCAATACGCTGTTTGGAA
40 TGTCAGCGGACGGACGGTGCGGGTGTCGCGGCCGTGCGATGCGCGGTTGGCCATCCAAA
TTTGGCTGCGGACGACATCGGCTTCCAAGTGTGG

- The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 362>:

gnm₃₆₂

GCATTGCTCTGTTGCCCTTACTTTTAGCATCTTGATCGGCGGCAATTCGGCGTGCAGC
 CTGTTTGC GAATCAACGCCGACCGCGTACCCCGTCACCTTCAAACTCTAAGGACGTTCCCA
 5 CCGCCCCCTGCGGGTCTTCGGTAGAAACACGCCGCTCAACGGCCCCGCGTGGTG
 CGGCAATGCGGCTGCCAAGGCGGAATATTGCTTCTTAAACAAGACGGTACGGAAATTC
 CGACAAGCATCAGGCAGAGGAGCATCTGCCGCTTAAAGAGAAGGATATCTGTTTTAG
 ACGGTACGCTGAAGAAGACAGGCTGACAACTTAAAGAAGAAATCAACGAACGGTATTCTG
 ATGTGAGGGTTATCACATCGAAAAAGAGAAGAAAAATATCAATATCAATTTGTCGGTG
 10 CCGGCTATGTGTTTACCAGGGCGGAAGGAAGGATAATGAAAAAGAAAAGACTCTCGATG
 GTAAGGAGTTTGTAAACGATTTAGTTATGACGGTTTTGTATATTATTCGGAGAACGTC
 CTTCCCAATCTTTACGAGCGCGGAACGGTGCATATTCGGGTAACGGCAATATATGA
 CCGATGCCAAACGTCATCGGACAnGTAAGGCGGTTyCAGTACGGATTGGGTTATACCA
 CATATTATGTAATGAATTGGGGCAACTTCTTATGAGGCTAGGGAT

15 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 363>:

GNMEP68TB22A gnm₃₆₃

ACATGGCATTGCGACTTCATGCGTTCGTGCGGGCTTCGGCTTTTCAGACGGCATATTTG
 ACGTTATGATTAAACAGTTAAACAAGATTTATCACACGCCGCTCAAGAGAC

20 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 364>:

GNMEP74TR gnm₃₆₄

ACTTCAGCCTCCCAAGTAAGTGGCATTACAGGCATGCGCCACCATGCCAGGTAATTTTT
 TTTTTTGTATTTTAGTAGAGACGGGTTTTGCCATATTGTCCAGGCTACTCTTGAAC
 25 CCGTGCCTCAAGTGATCCGCTTACCTCAGCCTCCCAAAGTGCTGGGATTACAGGTGTGAG
 CCACCATGCCAGCCATCCTTGTTATTCAACCTTACCACACTTTAAATCTCTGCACAGGG
 AGTAAGTATGCAAAACGCTCCCATCCGGTCAGGCGCAGTTCTGCCACGAGGTCAAGATAA
 GCAGGCAGTTTCGCTGCGGGTGCCGGAGAAGAACAAATGGCGGCCGACCATTGGCCATC
 AGGCGCAGAACTCTACCATGCCGAAGTAGTTTCATCGCGTnCCCTTTTCCCGCGCGGCGC
 30 GGCTTTGGTTTGAAACGCGCTCGTGTGCTGCTTTCAGTTGCTGATATACGCTGCC
 GGCAGTGGTGG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 365>:

gnm₃₆₅

CCTGCAGTTTCTCGATATAGCCTTCTGCATCGGTACGGGTATGTAGTGTGTAACCGGGTT
 35 TGTAGAGCGCGTTTTTCTTTATCCAACGGGCATCGCTGTCCTTACTCGGTGGTTTGAC
 CGCTGATTTGCTCTTCTCGTCAACTTCTATGGCCTGACGCTGTTTGTCTGCCGGCGGTTCT
 GAATAATGGTGGCGTCAACGACGGCAGCGGATGCTTCTCTATTTTAAACCTTTTTTCGG
 TCACTTGGCGGTTAATCAGTCCAAACAGTTTCAGACAGGGTATTGCTTTCGCCACCCGGTT
 40 GCGGTACGGCATAAGGTGCTGTAATCGGGATGCTCAGTTCTGTCAAAACGGCAAAACAGG
 TTGAATTCGATCGGGTAAATGAGGCTGTGTTTCAGTTTCGGGATCGGAGAGGCTGTGCCAT
 TGTCCGAGCAGGACGGCTTTGAACATGGACAGCAGGGGATAGGCAGGACGCCGCGGTGG
 TCTCTAAGTTAACGGTTTTTTTTCAGGTTTCAGGTATTGTTTCGATCAGCTGCCAATCAATC
 ACCCGGTCCAACTTCAATAGCGGGAACGTCGATGTGTTTGGCAATCATGGCTTGGGCG
 45 GTTTGyTGAAAGGTGCTCTTGAGAAATCCCTAATGCTTGGTGGGAATTTAGGGGAT
 TTTGGGAATTTTGCAAAGGTCTCTAGATGAGTAAAAAGAGTGCAGGCTGCCTAAAAA

-742-

GACAGAAAAAGTCTTCCGGCAGCCTGCACCTTGGTTTCATTTCAGTCAGTAAACCCAGT
AATACGACGGTCTGAAAACGCAGAACGTTACGAAAA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 366>:

5 **GNMEQ90R gnm_366**

GCTTTGCGCTCAAGCGCGCCAGTTGATTTGGTTGCGCGTGGTTTGGGAGAAGCTT
GCGGAATACGCGCAATACGTCGCCCTTACCGGATTTCCGACCTTCGCGTACGGTAATCA
CCGCACCAACGGGGAATGCCATGGATACCGGAGTAGAAGTACCGGGAATACAGATTTCCA
CGCCGTTTTTCGTCCAAGAGTTTACAGTCGGACGACGAGTGTCTCTTCTTGAGAGGAA
10 CGACGTTTACCGTCAATACCAACCAAAGTGGACAAACCGGTTACATCATCGGTTTGTGTTG
GCAACGGTAACGCCCTCTCCACGTTTTTCGAATTTACCATACCTGCGTGTTCG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 367>:

GNMEQ91R gnm_367

15 CAAAAGTTTTTCAATGAAACGGTTGCGGCATCGGGCGGTGTCGACGTTGATTTGGTTCC
CGTGTGTGAGGGAGGGAAGCGGCTTCCCTCAAACCTGCCTTTGATTGCTGTTGTCGCGC
GGTGATGGGGAATCGGGAGAGGTGCGCGGTATGTGTGCCCGCGGTATTGTGCGATTGTGCC
20 GCTGTTTTTTCCCGCTGCGCTGATGCGGACAAAGGGCTTTCCGCTCCGCAAACCGGCAAG
CATGGGACGGAGATAAAATCGTCGGGAATACCGTAGATCGG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 368>:

GNMEQ92R gnm_368

25 GAAACGGTTGCGGCATCGGGCGGTGCCATTGTATCCGCGCTCCTTCGGGGCGCGGGT
GATGTTGACGCAGATTCCGCTGCGTTGACCGATGATGTTGCGCGGTGATGGGGAATCG
GGAGAGGTGCGCGGTATGTGTGCCCGCGGTATTGTGCGATTGTCGCGCTGTTTTTCCCGT
CTGCGCTGATGCGGACAAAGGCTTTCCGCTCCGCAAACCGGCAGGCATGGGAGCGGAGAT
30 AAAATCGTCGGGAATACCGTAATCGGGAAGCGGGCTTGTGCGCTCCGCGCTGTCGTGCGC
C

30 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 369>:

gnm_369

CATCGGGCGGTGTCCATTGTATCCGCGCTCCTTCGGGGCGCGGTTGATGTTGACGCAG
ATTCCCGCTGTGTTGCCATTATGTTGCGCTGCGGGATAAGCAACATTATGACCGGCTA
35 AAAATGGGACGCGGTTATCTCGATTGTACCGCTGTTTTTCCCGTCTGCGCTGATGCGGA
CAAGGCGTTTTCCGCTCCGCAAACCGCAAGCAGGGGGACGGAGATAAAATCGTCGCGGAA
TACCGTAATCGGGAAGCGGGCTTGTGCGCTCCGCGCTGTCGCGCCTTCAGACCGGTT
CGTAATAGCGGTAAACGTCACCGTCAAGGCTTCCGTGCGTCGAACCTGCCACGGCGTGA
AATAGCGTCAAAAACGTGTTTTG

40 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 370>:

GNMER68TR gnm_370

CACTGTGCCCGCCTTTGCCCGTCGGTGC GGCAAGCGCATGTTGGGAAGATTTTCGTCT
 TCACCGCAAAATCAGCGCCAGCAGTTTGGCAACCGTTGTCGTTTTGCCCGTTCCCGGCCCG
 CCGGTAATCACCATAAAAGACTGCAACAGTGC CAAGCGCGCGCATCGCGCTGCCCTTCG
 5 GTGCCCGTGCCTTGA AACCAATTGCGAGGTTTTGCCCTGC GCGCTGCCGCGTGGGGCG
 GATGTGCCGCGTGC CGCAAGCGTTTTATCTCGGCAGCCAAATCGTATTC CACTGCCAC
 ATCCTGCCCAAAAACAGCCTTCTGCCTTCCANAATCA AAGCGCGCGCGGATGTTCCGCACA
 ACnGGTGCAGTGCCGACAGCGCTCAGCCTCGCCACCGCTCAAACGGATATTGAACCTTT
 TCTCCACTCGCGTCTACGCTGCGACTGTGATAATGCCTTTTGAGCGTCTTTTT

10

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 371>:

GNMER69TR gnm_371

CAGGCAGGTTGGTTCGGTTGCAGCCACTTCAACGACTCCGGCTTCTGGCTGGTGGCCGCT
 CTCCTTGGACATGGACGTACCGACCACGCTGAAAACCTGGACGGTCAACCAACCCCTCATC
 15 GCACATCATCGGCTTTGCCCTTGTCCGCACTGCTGTTCCGCATCGTCTGACAGACGGAAAGG
 ATAGTAAATGACTACGCATTTTGTGCTTATGGCGTATGCGGCTGC GCGCAAGACCACCGC
 CGCGCTGTCCCTGCAGAAACACCTCGGTCAATGTCCCTATGCCGAAGCGACGAGTTCCA
 CACCCAAAGCCAACCGCACAAGATGGCGCGGGTATTCGCTGACCGATGAAGACCGCTA
 20 TCCGTGTTGGGCAATCTGCCGACTGGATGACGCAACAGCGCAAAACGGTGC GAACCA
 CACCATCGTAACCTGTTCGCCCGGTACGAATGACCGTTTTTGCAATGCCTGAAACAGCGG
 TTTCCGTCAGTTTGC AAGCAC TTGTCGCCCGGAACCCGCATAGTGTTCGAGAAACGGAT
 TGCCGCCCTTGCCGCGCTTGGGCAAAATCATCTGTCTGCCGTTCCATT

20

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 372>:

GNMER70TR gnm_372

ACTGGAAGTGC GCATCGAAGATGCCATTGCCGCCGACGAAGTGTTCGTTACGCTGATGG
 GCGACGAGGTCGAGCCGCGCGTACCTTTATCGAACACCAACGCGCTGATTGCCCAAAA
 TATCGACGCATAAGTGCCTTTTAAAAAAGGAGACGGGCATCGTGCCGCTCTCCTTTTTT
 30 GGTGTGTTCAACCGGAACCTGTGCCGCTCTGAAAAACCGTCGGAGCAAAATATGATCAGCAT
 TTTGATATTTTTCAAATCGGTATCGGGCTTCCAGTTCGCATACGGTCGGCCCGGATGAA
 GGCAGCCGCCGCTTTGCGGCAGGTTTGGATGCACAGGCTGTTCCGATCTGTCATCGACAT
 TACGGCTCGCTCGCACTGACCGSATA CGGACGCGTACATTTGACGCGCTGCACAAACCG
 GGTACCGCGACATTCTGCGCGGAGCCGAAGGCCAAAGCTGCCTTCATCCACCTCAGTCCG
 35 CCGCAAGACATCAACCTCGAGCGCATGATGTCGCGCAGGAGACATTACATGAAAGCAGGG
 ATGCTCGAT

35

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 373>:

GNMER71TR gnm_373

CGGCATCGCGATTGAACATGATGATGTCGCGGCTTTTAAACGTACCTGGTTCGCCCTTCGT
 40 CGGTGTTGCAAAACCATATTTTTCGCCCGGGAAGAACGGGGCATAAAGCTCCATTTC
 AACCGGTGCGGAAGCCCGCACCGCGCGCCGCGCAACACCGGAGGTTTGACTTCGTCAA
 TCACATCGGTTTGCAGATGTTTTTCGGACAGAAATTTACGAGGCGGATAGCGCCGCG
 GTTTGACGTATTGTCCTCAATGTCCAGCAATCGGGATTGGCGGTATCCACTTTGGTCAAAA
 45 TCACGCTGATTGGTAAATAGCCATTTTGGGTGCTGTTGTTTTCGTATCGGTTGCG
 GTCGCTGTTTCAGACGACCTTAAGATGCTTTGTGTACCGGCTTGTAACGTGCTGTGAAA

-744-

TAAATCTAGTTTATCAAAATCGCTCGGTTTGGAAAGGCAGCCTGCCGCACGACATCCCGCT
TGCCCGCATTCGCCGAACGCTCGAACGCATCCGCACGCAGCACATCTCCGGCTCAACGG
GCAAGAAATCGGCTTCATCCCCGA

- 5 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 374>:

GNMER72TR gnm_374

CGAAAGCGGGAATGCCGAATCCGTCGCCGCGGAAACCTGCATCCCGTCATTCGCCGAAA
GAGGGAACTAGAAAACGCAAGCTGCAAGAGTTTATCGGAAATGACCGAAACTCAACGAA
CCTGGATTCCCGCTTTCGCGGAATGACGGGGGTTTGGCGGGAATGACGAGGGTTTGGGA
10 TTTCTGTTTTGAAATTTCTGTTTTTGTGAGAAATGGCAAGATTTTCGGTTCTGTATGGAT
ACAGAGATTTAGATGGCGGGAATTTGTGCGGAAAACAGCAATCTGAGACCTTTGCAAAA
ATAATCTGTTAACGAATTTTGACGCATAAAATGCGCCAAAAAATTTTCAATTGCCTAAA
ACCTTCTTAATATTGAGCAAAAAGTAGGAGAAATCAGAAAAGTTTTCACGATATTTTCA
15 GACGACCTTTAATCGTTTTTGTGGATCTCGAACACTTGCTGTCTGCTCATTCGCCG
CAnGCGGGAATCCATCTCAATGGTAAGCAATGCTTTATTAA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 375>:

GNMER73TR gnm_375

CGGCAATACCGATAACGGTCAAATCCACATAACGGTTGTTGGCAAAATGCTTGGCGCACCA
20 ACAGCAWAGCCACAGACAGCGAGCTTGTCCGAACAAATCGGCGCGCTCGGCATCGCTAAATAGTT
GCACCGGCTCAAGGCGGGCTGTATGCCCGGGTCAGCATGGGTGCAACCATCAATACCT
TTTGGCGAATTTGCGGCAACCTTGTACGGCATTGCGGGTGTTAAATCAATATACTGCC
CGGGCAGCGGATGCTGCCCGGAATCTGTCAAAATCAATATGGGGCATCATTACTCTCC
CTTAGTATTGCGGGTTTGGTATTGCGGGCGGCATCTCAACCAACCAACCAATCGCCGTC
25 ATCAATCATGCGGCGGTAATACAGGCTGTGTCGCTCCAACTCCACCGGCTCTTGGCCGAT
ATATTCTGCGGGTTGTGTTTTTGAAGATGAGATTGAGCATAAAAATTTAGTAACTAT
GTATTGCAAGGCTCAATCTTACCGTCATCCACGAAAGTGGGAATCTAGAAACGC
AAGATTGCAAGAAATTTATCGGAATGACCGAGACTCAACGAACCT

- 30 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 376>:

gnm_376

GGCGCTGATTGCGATTGTAGGGTTTGTAGGCTGGAAAAGTTACGGCATTTTTAAAGTTT
ACAGCAWAGCCACAGACAGCGGATGAGCAGGAAAGCGCAAAAAGAAAGCGTTGTGCAGA
CGATGACGGAGCAGCGCTGCATCATCAGAGGAAATGCCCTTAAAAAATTCAGACAATTTGA
35 AACCTGAAGACTTTGTGCGGACTTTACCGGAAAAGCCGAAAGCAAGCTATTATTAACA
CAGTCCGACAAGTAAAAACCTTTGAGCAAAATCGCCGGATGTATAGACGGCGGAAATCAG
ATTGCACATGCTATTCAAATCAAGGAACACCTTGAAGAAATAACAAAGATAATGTGTA
AAGAATATGTAAAAACGGGTGCTTTCAATCTTTAAGGACGAACAGCAAGAGGACGG
AACAGTTGGAACAGTCCGCGAAGCGGACAAGCCGCAAGTTCTCGTAATGGGCGGAAAGC
40 CGTAGCAAAATCTCATGTACGACAACTGAAGAGCGCGGAAACCGTTTGAAGGAATTTGC
GCGCGAGTCGTAAGCAGAAAGTTCAATCCCTACCCCTCAGGATGGCTTGAGCTGAGTGA
AGGGGTTAATTGCTAGAATGGCTGTTTTTTTAAAGTGCTCAGTCTGGAATCGCTTCG
TTCGGGGTTGTAGGTGACGAAAAATATGGCAGAAAAAGGAAACGGGGGAAGCTTTGTA
AAGATTGGGCGCGCTTTTTACCCTAATCTTTATGAATACCCCTTTTCCTTTTTTATGAAC
45 TGTTTTTCAGTACCGGTAACCTCTCGAACGGAGTGATTCGAGACTGAGATACGCCCAATTGA
AAATCAGACATTGGGTCGATCAGAAACCTTTTACCAGACCTGCGACCCCAATCTACGG

CAACGGCGACAATATGCCCGATGAGAAGCTGCTGCCGTTGTTGACAAAAATCAATTTGCAG
CAAGGCAAGCATT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 377>:

5 **GNMER76TR gnm_377**

CCGCCGAAGCAATCGAGGCGCGTGGATATTGTTGGTAATCACCCTCAGGCTGCCGCGCC
GCCTGACCAGCTCCGACACCACGGCCTCCATCGTCGTGCCGATACTGACAAACAGCGACG
AACCCTCGGGGATGTGTTCCGCAATCAGCCGGGCAATGGCGTTTTTTTCGTTTTCGACACC
GGGTTTGGCGGTCGGCGGGCAGGCCCTCCGGCAAGTTTCGCCCCGAAGATGCGCGCCGT
10 GATGGCGTTTCAGGCTGCCGACCTCCTCCAACTCGCGGATGTCGGCGGTATCGTCTCGCG
GGGTAACGTCCAATGCGGCGGCAAGCTCGTCCACCACATAAACTGATGCCGGCGGACAA
GGCTTAAATCTCTCCGTCGCTTTGGATTTTCGGCTTCATCGTTTTCTGAAAACTCAGATA
CGGCAAGGGCGATAAGCTTCAAGCCCTGAATGAGTAGATCAGCCCATGAGGGCTTGGCG
TTTGA

15

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 378>:

GNMER80TR gnm_378

AAATCCCGTTTATTTCCACAAAAACAGAAAAACAAAAACAGCAACCTGAAATCCCGTCTTT
CCCGCGCAGGCGGTAATCTGAACACGTCGCTAGTGAAACCTATATCCCGTCATTTCGACAG
20 AATGGGGAATCCAGGATGACAGGGAACCGTTTTATCCGATAAGTTTCCGACCCGAAAG
GTCTAGATTCCCGCTTTCGCGGGAATGACGCGGAGGGTTTTAGTTTTCTCGATAAATG
CACATCATCCAAAGTCCGTTTATCCACAAAAACAGAAAAACAAAAACAACAATCTGAA
ATTCCGTCCTTCCCGCTGTGCGGGAATCCGGCTTGTTCGGTTTCGGTTCTTTTTCTCGT
TTCCGGTGATTCTAAACCGTCATTCCCGCGCAGGCGGGAATCTAGGTAGCATACGGGT
25 TTGTTCCGCAACCATTTGGGCCACGCGCCGAAAAACTCGCCACCTCGCGGAGCAGCTC
GGTCTGTGGGGCTTCAACTTGGCGGCGCGACACCCGTCGCCGAnnAGATATGCCGCG
CTTGTCGAACATTCAAAGCGAGCTGATGCCGAATTGCT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 379>:

30 **GNMER81TR gnm_379**

CGCCCTTTGAATTTGCCCCCAATATGCAGCCTTGCCCAAGACCAATGCCGCATTCTGGTT
CAGATTACATTGCCGTTAATCTGTGTCGCTCCAAAGCTGTTAAAGCCTATCCGGATAA
GTTGCCTGTGTTGCAGGTAACGTAACCGGTATAGTCCGAGCGCACGCAAACTCATCGCC
GTTTTTGTAAACCAAATTTACTTTGGCGTTGTCTGTTGCGGTGATGTTGGCGGTGATGC
35 GGATACATTCTCGCGGAAGAGAATGATGCGGATTGATTAACCGCAATTTCTGTGGCTTT
GAATGTCGGTTTATCCAGTCGCTTCAAATACGACTTCATTGTTTTGGAGAAATGTGC
GTCTTTTCGGGCTGAAGATTGTTCACAAAATCTTTCGCTGTGGTGTGTTGGACGACCTGA
TAACAAGACATTGCCTTGATCTTTAAGCTTCGGTTTTCTTGATAAATCTTGCAGCAT
AAAATTTAGATTGCGCTTTCGCGGAATGACGCGGAGGGTTTTTGTGTTTCCCGATA
40 AATGCACATCATCCAAAGTCCCGTTATTTCCACAAAAACA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 380>:

GNMER87TR gnm_380

CAACAACCTCAGCGCCTGCATTATAGGCAGCATCAACCATTTCAAAAGCTGTTTTAAAG
 AGCCTTCATGATTGATGCCGATTTCACAGATAATCAATGGTTCGTGGTTGTAACCTACTG
 AACGATTACCAATTTTAAATTCGTTGTTGTTTGCAATTAGCTTTCCTTGTGATTAAGAA
 5 TGTGTTCTGCCTGTTGTAATCAAGCTCAGTATCAATATCGATAGAGTCTTGATGAGACA
 TAATATAAGTTCGTTGGGCGGATAAAAAACAATTATTTGCAATTAGTGAAGCAGAT
 CATTAAATGTAATTGCACCATTAGGCCTAAATGCCTGAGTAATTGTTGGCGAGGCTGCT
 CCAATTCGCTTAGATGGCGCATGGGGGCATATTCGCCATTATTGATTGAAGCAAGGTTT
 10 TTAGTGGATGATGCTCCACAAATACGCACTTGCCCTGCTTGTGATAATGTTGCGTGAA
 TATCGGAATAATTGACATAGTTGAGCATTAATGCCCTGATCGCGCTGCCGACGGCGATAT
 GTGCGAATACTTTGAGCCGCTCGGAAAAACATCAGCACATAGCCCATATTGTTGCCACCG
 AATATTGCCGCTGATTTCGCTG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 381>:

GNMER88TR gnm_381

CACGGATGACGCGCTACGGATTTCGGGGTGGCTTCTTCATAGATTAAATTGCCCGCG
 CGCCGGCAGTGGAGTCCAATACATCGACCAAAGGCACGCCGTGCCGCAATCAGCTCGCGG
 TCGTCTGTCGCCACGGGCAATCGTTCTTTCGGGCAATGTCTCCGAAATCGGCATAC
 GCACAGCATATGCCATCCATACGCCGTGATTTAAATCGAACGCGCTTCAATTTAAGGA
 20 AGCCGTATATGGCAAAGCCAGTGGCATCAGCACCATCCAGCCGTATGAGACAGAAAAAT
 CGGACATATCCATCACTGTTTGGGTGAGTGGGGAAGCTCGCGCCCATATTGGCGTAAA
 CTTCTTTAAAGGCGGGCAGTACGAAATCATCATCAGAAATACCAAACCGATTGGCGATG
 CAGAGACAACGGATCCTTTTATTTTCATCAATAGAGAAAACTTCAGAAATATGAGC
 CCCTGTGCGTAATGGACTGTTGTTGTAATAAGGTTACTGTGCGGAATTAC

25

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 382>:

GNMER91TR gnm_382

CACGAAGCCGCGCGGAACGCGTCTGCCACAAACAGCATACGTTTCGGGGCGGGGTTTCG
 CAGTTTCGCGCGGATTTTCGCTTCTTCTACTGCGCGGATTGAAGCCGCAACAGCCGTGT
 30 TCCGAAGCCGCGCAGGGCTTTTGGAAACTTCTTGAATCGTGGCGCCATCGGCATCAC
 TTCGCCCAACCGATTTCATCTGCGTGGTCAGCGGTCGCTCTGCGCAGGGAATTTTCAA
 CGCGAAACGCGGATTTTGTGAACCATAGTCGATGGAAGGCTCGAACGACGCGGGGGT
 TTTGCCGCCGGTGATGTCGTTGCGCAACTCGTCCAGOSTAAAGCCGACCGCCAGCTTCG
 CGCCACCTTCGCAATCGGGAACCCGTTGCTTTGGAAGCCAAACGCGGAAGAACGGCTCAC
 35 GCGCGGGTTCATCTCAATCACAAACCGGTTcGnGATTGCTGCGCCCCCGCTTGGCCGTGA
 TGAATCGTTTCGCGAGGCAATTGATTCTTTTCAAATACCGATGCCGTTTGAAGAGTGT
 CAGACGGTATCTTCCGAACAGACAGATGAATATGTTTCCAACTGGACAAATACTG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 383>:

GNMER94TR gnm_383

CACTACGTTCAATTTCGGCATTGCTGGTGGGTCGTTTCATTTCCTTTCTAAATCTAATT
 CGCCTTGTTTTTGCGCTTTGGTTGCGGCTTTAAATGGTGGCGCTTCATCACCAGCATCA
 CAAAGTTCAATTTTGCAAAATCCGCAATGTGGTTGATTTCCTCCGCGGTGCGAATAT
 45 CGTTATACAGCTTTGAATGCTGGTAAATTTAATTTCAATGCCGCTGAATGTGGGCTAA
 ATGTCTCCACTTTGCGAATAGGAATTACCGTATCGCCCTGCAAAATCTTCTCGGTAATA

AAATTTTCGCGTGCCTGGATCGGTAAAAATTAATTCGGTTTTATCCAGATATTGTTTT
GATTACAAAAAACAGAAATGCCGATAACCTTTTCAAAATAATACAAACGCCCTTGC
TGATGAACGATTGGACAGCTTGGATATTACCGGGCCGA

- 5 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 384>:

GNMER95TR gnm_384

AGCGCGACGGTTTGAAGCGGCCAGCCTATGCCGACTGTCGGGTCGTTCCATATTA
TGTTTCGGCTTCAGGCTTGTAAATAGTCCGTGCATTTATAGACGAACTCGGCTTCATCGCTC
AGTACATAGAAGCCGTGTGCGAGGCCCTTCGGGTACCCACAGTTGGCGTTTGTTTTCTGCG
10 GACAGATTTTCGCCCTACCCATTTGCCGAAAGTGGGGGAGTCTTTACGCATATCGACGGCC
ACGTGCAATACTTCGCCGACAACACGCGTACGAGTTTGCCTTTGTGTGTTTTTCAGTTTGA
TAGTGCAGGCCGCGCAATACGCCCTTTCGCGGATTGGAGTGGTTTTCTGCACGAAGGTG
CGTTGCGAGACTTGGTTTTAGACCACTCGTCGCGGAAGGTTTCCATAAAAAAGCCGCGC
CGCTCGCGGAAGATCAACGCCGCCATCATCTGTTTTGCCAGCACCTGTTGCCATATTG
15 AACAGCAAAATCGCTTGGCTTATTTTTAAATCAGGGAATCGCTAGCTTTGAAGTGGC
TCAAAATCAAAAGTTTTCAAGGGCAGATTTaTGCC

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 385>:

GNMER96TR gnm_385

CGGCTTCGACCGCGCGGTGTGGTCGGGATGTGCGGACAGATCGACTTTGTGTTTTTCGC
CGTTTACTTTGAATGTGATGTAGGCATCGGGCAGGTTGAGTTTTTCGGCAAGCGAGCTGA
GCAGGACTTCSCCGCTGCCGTTATCCAGGACCGCGCTTTGAGGGACGAGCTGCCCGAGT
TCAAAACCAAGATCAATTTTTGGGACATTTCTTACTCCGGAAAGTTTCAGACGGCATTTG
20 GAATCGGACACGGATACTAACCAGGATTTCGTGCCGAATCCGCTTTTGCTTCCGTGGCGGGA
25 AAGTAGTGGGGCGCTGAAAAGGTTGATAnAAGAACAGGCTATTCTAGCAnAAATCTTT
GCAATTGCTTGGCTTAATCGGGCGTTTGCCTGAAATGGCGGAAGTCACCTTGGnGCTCAA
GCAGTTTTATCGTCAGGAATGGCGGTATCAATGATGTTTCATCTTTTATCTTTCATCTAAA
GGGCGTCTGAAA

- 30 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 386>:

gnm_386

AATTCAAGAATCAATAGGAAGGTTAAAAAGGATAAACTCTTTTTATAATTTCTCATCG
CTTTCAATTATTTCGTGATGCAACATTAAATAGTTTATTAAATGATGGTAAAGTACTTGA
AATGGGTAATCATGATCAGCTGATGAAACAAAATGGATTTTATGCACGTTTAAACCAATC
35 TTCGGTTTCGTTAATAAATTTCTAATGACTGTTGCTGAAATTAATAAACTTGCAATTAATAA
TCAGGTATTTAATGAAGCAAAAGCGCTTTTAGAAAAAGSTAATGTTATTTTTCCGGGTAC
CGAGCTCGAATTCGTAATCATGGTCATAGCTGTTTCTGTGTGAAATTTGTTATCCGCTCA
CAATTCCACACAACATACGAGCCGGAAGCATAAAGTGTAAAGCCCTGGGTCCTAATGAG
TGAGCTAACTCACATTAATTGCGTTGCGCTCACTGCCCGCTTTCCAGTCGGGAAACCTGT
40 CGTGCCAGCTGCATTAATGAATCGGCCAACGCGGGGgAgAcCGTTGCGTATTGGGCG
CTCTTCGCTTCTCGCTCACTGACTCGCTGCGCTCGGTGCTTCGGCTGCGCGGACGCGGT
ATCAGCTCACTCAAAAGCGGTAATACGGTTATCCACAGAATAnGGGATAACGC

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 387>:

GNMES45TR gnm_387

CGGGTCGCGCCCAACAGCCCATTTACCTTCGTCTTTTTCATTTTGTCTTTTCCCAA
 TAAGCCCATTTTCCATCATCTCGATTTTGGCCAAAAGTAAAAACGGTGGCGGCTGATTGG
 GCGCAACGCCCAATGTACAACCTTAAATCGCCCAAAAATTTATGCCAAAAACGCAACTT
 TAAACACGTACATTGGGAGGTCGCGCCAATCAGCCTT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 388>:

GNMES47TR gnm_388

CGCAAAAAGCTAGCGCACGGCGCTGTTTCTGCGGGTCGATATCGAGCGGCGCGACCTAA
 GCTTGACAGGAATATTGGCCTTAAGTGACAGCATCGGCAAAATCGTTGACAGCCCATAGGC

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 389>:

GNMES52TR gnm_389

TCCAGCTCGGTAGCAATACGAATTCGAGCTCGGTACCAGGTTACAGGAGAAACAGATTTA
 AGAGGTTCTAATATTACAGCGGTAAAACTTGGTTGTGCGCACCAACAAAGGCAAGTTG
 AATATCGAAGCGGTAAACAACCTATTGAGCAATATTTTCTACACAAAAAGCGGCTGAA
 CTCAACCAAAAATCCAAAGAATTGGAACAGCAGATTGCGCAGTTGAAAAAAGCTCGCCT
 AAAAGCAAGCTGATTCACCCCTGCAAGAGAAGCGGACCGCTCTCGCTTCTATATTCAA
 GGCATCAACAAGGAAGTTAAAGGTAAAAAACCCAAAGGCAAGAATACCTGCAAGCCAG
 CTTTCTGCACAAAATAATGACTTGAATTCGCGCACAGGCAATCAATAACCGGTTCCGAT
 ATTAGCGCTTCCAAAACCTGAACCTTCACGCCGAGGCGTATTGCCAAAGCGCAGAGAT
 TCAGAGCGCGCTGCTATTCTGATTGACGGCATAACCGACCAATATGAA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 390>:

GNMET50TR gnm_390

TGAGCAATTTAATTGCCGCTCGGTACCCTAACATATTGCCGCCAAGCGGTATGGAAGCGG
 AAAATAATGGTAGTGGGCTTCAGACGGCATCCGCCCTCCCGTCATTCCCGCGTAAGCGG
 GCATCCAGACCTTTGGATAGCGGCAATATTCAAAGGTTATAAAAGACCCGTCATTCCCGC
 GCAGCGGGGAATCCAGACCTTTGGATAGCGGCAATATTCAAAGGTTATCTGAAAATTTAG
 AGGTTCTAGATTCCCGCTTTCGCGGGAATGACGAAAAGTTGCGGGAATCCAGAACGTCGG
 GCAACGGCAATATTCAAAGCCGCTGAAAAATTTAAAGTTCTAGATTCCCGCTTTCGCG
 GGAATGAC

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 391>:

GNMET92TF gnm_391

CCGTCAAATAGGACTGCAGTGAAAGTCATTTTGGCGCCTCCTTATTTTCCAACGCAAGC
 GTGTGGCTGCCGTCGAGCGTGATGCTTTTGGCGTACACCTGCAATTCGAGCGACTCGCCT
 TTGAGCAGAGTGAAGACGACGTTTTCTTTGCCGACGGCGACTTTAATCAGACGGCGCGG
 TAGTTGATGTGGAAGGCGTAGCCTGTCCACGCACCTCGGCAGGAACGGTGCGAAGCTGAGT
 TTGCGCGCCGAGGTTTTCATTTTGGGCGAAACCTTTGAGCAGATGGCAGCCAAAGAGCCGGTC
 ATGGAGGGGATGTGCAGGCCGCTCCTCGGTGGCGTTGTTGTAATTGCGCAAGTCCAGCGG
 GCGGTGCGCTGGGACATTTCCACGGCTTTTCGTCTTTGCCCAATTGCGGGGCGAGAATA

GAGTGAATACAAAGGCGACAGCGAGCTTTTCATGCACGGTCAACGGTTCGTAGAAGTCGAA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 392>:

gnm_392

- 5 GCACAACCTTAATTATGTTGCCTGAACATCATATAAAAGATAATAAAAGGTACGACGCCA
TGAATTACGCAAAAGAAATCAATGCGTTAAATAACAGCCTTTCGGATTTGAAAGGCGACA
TCAAGCTTTTCATTTCGAATTTTCCGCGCGAAAAACGAAACAAATGGAACCATGTCTGTGGG
ATTCCATCCATCGCCTGCAAACTTGCACCGGAATTTGTTTCGTAACCTACGGTGCAGAA
ACTCAGCGAGCGCGACCGCACACACGGCATCGTCAAACGCATCAAAACAGGAAACCGGCT
10 TGGAAAGCCGCGCTCACCTGACCGGTATCGAAGCTTCTCCGACGAATTCGCGCAAAATTG
CCAAAGATTATTGGGACAGCGGCATCGCGCGATTGTCGCCCTGCGCGGAGACGACGCGG
CCGGTTATGAGAAAAACCGTTTTACGCCGAAGACTTGGTTAAGCTATTACGCTCCGTCG
CCGACTTCGACATCTCTGTAGCAGCATATCCCGAAGTGCAATCCGAAAGCAAAATCCGAC
AAGCGCACTGAATTAATTTGAAACGCAAAATCGATGCGGCGCGCAACACGCTCATCAACC
15 AATTCTCTCTCGATGTTGGAACGCTACCTGCGCTTCCGCGACCGCTGCGTGATGTTGGGTA
TCGATGTGGAATCGTCCCGGTATTTGCTCTGTTACCAACTTCAGGCAGCTCGGTAAAA
TGGCTCAAGTAACCAACGTCAAAATCCAAGCTGGCTGTC

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 393>:

gnm_393

- 20 CGGCTGCTTCATTGGCGTACGGCGCGCTACTGCTCACACCGGTACTACCGGAAAGTTAT
GCAGCAAGCGTAGGACGTGTCTTCAGCAGCAGCGGCTCTGAACAGTATACAGAGATCTG
AATATTTACTgCATAACAATGCGCTCGAAAAATTTGAGCTTTTCAGACGGCATTGAG
CCGTAAATCATGGAACGCGTGGCGCTGAAGCACACACCTTACGCATGGATTTTAGGTTT
25 CATGCAGGCTACAGCTTGCTCCATAAATCATTTTATCAGAGCTCGTAGGTACGGTTAA
GCTTTTAGGGTTAGCGGTACAATGTGAACCTCCATTTTACCTGAATGAATCGTACCAAA
ATTGGTACTTAATCCTGATTTCCCATCGCTGCCTATAGGATACCCAAATCAACAACAGG
ATTTCCTCTTGCTCCTTTAGAAAACTGGATAAGCACCTGAATGTATTCCGTTCAACAA
30 TCTTTGAGGATTAATGTTTGGATTTAAAGTACTCTTACCTCAATGTAGTTTCTATGTC
TGAAATATGTTTCCCTTGAGCTCCATCATGAATTTTAGTCCCAATAGATTTTGGCTTTAAA
ATCAACATTTGCGGGTTTGAACAATTTCTCCATCTACAGACTGAGATAATCTTGAAGCAGT
GTTATGCCTGTAGGAGTCTGAGAAATCCCACTAACCCGAGCCTTCCCGGTTTTGGCGC
CTTTGTCAGGTTTTTGA

- 35 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 394>:

gnm_394

- GACGGCGAGCATAAATGTCGCTGTCGTATTCTGTTTCATCTGGCAGCCGAAGGTGCGGATAAA
TACTTTTTTTCATGGTTGTGCTTTCTCAGGCAGCGGTAATCGCGGGGCTGATTTGTTGTTG
40 GATGAAAAAATTTTCAGACGCGCAGACGATCGCGCTGAAAAATCGGTGCGGATTATAGCA
CGATGTGGGTTTTGGAGGCAGGATATTGTTTTAAAAATATGAATTTAATCGGTGCGGACGG
CTGTATAATGTTTGGCTTTAATGGGAGATGTGTATGAAACCGGCTGTATGGGGCGGATTG
CTGCTGTGTGCGGTACCGCAATTTCCGGGACAGGGAACATCAGTTCTCGGTTATAGT
GGATTAAACAAAAACGATACAGCGTTGCTCGCCTTCCGCTACTATCTGTACTGTCTCGG
GCTTCGTCGCTTGTCTGATTTTGTTAATCCAATATATCAGACGGAAGAGGAATCGC
45 ACTGGATTGAGCCGAATGCGCTCCGAAAAACAGCAGACCGATGCGCTCATTCGCCGCGCAG
CGCGGAATCCAGACCTTGGGATAACGGCAATATTCAAAGGTTATCTGAAAGTCCGAGATT

CTGGATTCCCACCTTCGTGGGAATGACGGGATGTAGGTTCTGTGGGAATGACGTGGTGCAG
 TTTCCGATATGGATGGATTCTGTCATTCCCGCGCAGCGGGGAATCTAGAACGTAATACTA
 AAGAAACCGTGTGTAAACGGCAGACCGATGCCCTCATTCCCGCGCAGCGGGGAATCTAGA
 CCATTGGACAGCGGCAATATTCAAGATTATCTGAAAGTCCGAGATTCTGGATTCCCACCT
 TCCGTGGGAATGACGGGATTTGAGATTGCGGCATTATTCGGAAAAACAGAAACCGCTCC
 CGCGTCATTCCCGCGCAGCGGGGAATCTAGGTTTGTGCGGTGCGGAACTTATCGGGTAA
 ACGGTTTCTTTAGATTTTGCCTTCTAGATTTCGCACTTTCGCGGGAATGACGAGAGATTGC
 GGGATGATGGAAAGCTATGGGAATAACGAAGGTTAAAGTAATCACGGGATGTTGTTTC
 CGGAATAT

10

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 395>:

GNMEW92TF gnm_395

GGTTTCGCTTGTTTTAAGTTTTCGGGTAACCTCCACTTCGTCATTCCCACGAAATGCGGA
 TCCAGTTTTTTTGAGTTTCAGTCATTCCGAGAAATTGCCTTAGCATTTGAATGTCTAGATT
 CCGCGCTACGCGGGAATGACGGATTTAGGTTGGGGGCATTATTGSAAGACACAAAG
 CTGAAAGTCGGCATTTCCGCGCAAGCGGGAATCCAGTGCCTTGAGTTTCAGCTATTTAGA
 ATAAATTTTGGGACTCTAATCGCGTCATTCCACGAAAGTGGGAATCCAGGACGCAAAAT
 CTCAGAAACCGTTTTTACCTGATAAGTTTCGCACTGACAGACCTATATTCTCGCTCGCG
 CGGGAATGACGAATCCATCCATACGGAACCTGC

20

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 396>:

gnm_396

CCGGCGCAAGTCATCGCCGGCGCGCTCGGCAGAGACCTCAAACAATGCGCGTTTACGGC
 CGCGAAGGCCACACCGGTCCGCGGATCCGTCGACCATCGGCTTTGCCACCGTCCGCGCA
 GGCAGATCGTGCAGCACCACCGCCCTTTTCGCCACCGACGGCGAGCGCGTGGAAATC
 ACCACAAAGCGCAGCAGCGCATGACCTTTGCCGCGGTGCCCTCCCGCCGAGTTTGG
 GTCAACGGCAAAACGGGTTTGTACGATATGACGAGCTACTCGGGCTGAACAGCCGTTAA
 CCCCCATACAAAATGCCGTCTGAAGATATTGTTACACGGCATTTCGCCAGAGGCTC
 CGTATCGGCATATCAATGTTTCAGCACACAGGACGACGATAAAGCCTCGCCCTATGTGT
 TGCCTTGAGTCGGCAGCGGTTACGCCCTCC

30

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 397>:

GNMEW95TR gnm_397

GTCCGATGTCGTATTGATTCCAGATCAGTCACCATTTTTGGGAGTCTTCAATGGTTAT
 ATCGCCAAATCTTTCCATGAGCTTTGAACGTCCATTAA

35

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 398>:

GNMEZ23F gnm_398

TGGTTTTGGTGGTCAAACTCCTACTTACATGGATCGGCAAAACGACGATCACCAA
 CTGCAATCACTTCGTCAATCAGGTAACAGTCAAACTCCACCGCCACGACAGCGCAAAAG
 CCAAACGCGCTTTATCATCTGAAGAAAGCGTTTACCAGGCTCATACAAATATTGCCCCA
 GCTCCGAAAATTTCTTCGTAAACGCTTTACATAATCGATATCGAATTGTAATCCGGC
 AGATGAACGCAATTG

40

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 399>:

GNMEZ79TR gnm_399

5 TCCCTCTGGCCTGAACCAAGCCCGAAATTATACCTGCAACATCCGACACAAACAAAGGCA
TTTCAATATTTTTATTCTATGAAATAAAGCGTGAAGCAGGCTTACACGCTTTTATTT
GGCTGGGGAGGAAGGATTCGAACCTTCGCATGCTGGAATCAAAATCCAGTGTCCTTAACCG
CTTGACGACTCCCAAAAGGGCTGGCTGGGGAGGAAGGATTCGAACCTTCGCATGCTGG
AATCAGGATCCACTGTCTTAACCGCTTGACACTCCCCAAGCTCGCTTGACTTGGCTGGG
AGGAAGGATTCTG

10

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 400>:

GNMFC24TR gnm_400

CTCGAGGGAATTGACCGGAATTCTTCAAGCAATAAACAGGAATACCAATTATTAAAGA
TAACTTACTGCAGATCGTACATAAAGCTTTGAAGAAAAATGCGCCTTATTCAATCTTTGC
15 TATAAAAATGGCCCAAAATCTCACATTGGAAGACATTGATGACCTCATTCTTTCAAT
GAAGGGCCTACCGAGGTGACTAATGTTGTGGGAAATGGAGCGATAAGCGTGCTCTGC
CGTGGCCAGGACACGTATACTCATCAGATAACAGCAATACCTGATCACTACTTCGCACT
AATTTCCC

20 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 401>:

GNMFC24TF gnm_401

AATTCCCGAGGAATTATTCGATAAAGATAAGCTTACATTATGAAGAGCAGCATATTACA
GCCGATGGGTCTACTTGACAGTAAATTTGAAGAGCATTGGAAGCCTGTTGATGTAGAG
25 GTCGAGTTTAGATGCAAGTTCAAGGAGCGAAAGGTGGATGGGTAGGTTATATAGGGATAT
A

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 402>:

GNMFC32TF gnm_402

GCAGTCGACAGTAGNAGATCCCCACCGTACCGATGCAGAAAGCTATATCGAGAAATGCG
30 ACATTACCCCGCCAATGCCCATGAGTGCAACACCTGTCGCCGTTGTTGGAAGGTCTGC
CCAAAGGTACGACCGTCTATGCCGACAAAGGCTATGACAGTGCGGAAAACCGGCAACATC
TGAAGAACATC

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 403>:

GNMFC63TF gnm_403

CGATAAAAACCTGCGCTATCACGGCCTGATGCAGGGCATTTCGCGCGAAAAATCCGACGA
AATCTTCACTACATGGAAAAATTGCGCCGGCTACGGTTTCAACAAATCCACGCGCCGCGC
CTACGCCCTGATTCTCTACCAGACCGCATGGCTTAAGCGCGCACTACCCCGCCGAATTAT
GGCGGCGACCATGTCGTCGAATTGGACAAACCCGACCAAGCTCAAGCATTTCTACCGAGA
40 CTCGCGCGCAACCGGCATTGAGTTCCTGCCGCCGACATCAACGAATCCGACTACCGCTT

CACGCCGTATCGGCACATGAAAAACCGCTACGCGCTCGGCGCGATTAAAGCACGGGCGA
 GCGCCGCGTGAATCCATCACCCGCGCGGCAAGCGCGGCAAGTTACCGGCTCTGTT
 GGACTTCTCGAGCGCGTGGCGAAGAACACATGAACCCGCGCACCCCTCGAGGCCCTGAT
 ACGCGGCGGCGGTTCGACAGCATCGAACCCACCGGCCATGCTCTTGGCGAACATCGA
 CCTCGCTATGGACAACGCCGAC

5

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 404>:

GNMFD08TR gnm_404

ATTACGTATCGAGGCATTCGAGCTCGGATACCCGGGTTAATATCAGATTTTGGAGCAGTA
 10 AAATTTATTATGTACACTAATCCAAAACAAAATCAATATTGAAAACCTAGATTTATTTTC
 GAATAAATAGAAAGCCGCTTTATATATAGTAATAAATAAATACCCCTGTTTTCTTCTATTG
 CCTTTATTGTGCCATGCAAGTTGAGTTTGATGAAACTCAATATAACGACTGTAAAGATAAA
 TCTATTGTTATGTGCTGTCAGAATTTGATTCTCCCAAAGGCAATACTATAGTGGATTAAACA
 AAAATCAGGACAAAGGCGACGAAGCCGCACACAGTACAAATAGTACGGCAAGGCGAGGCAA
 15 CGACGTACTGGTTTAAATTTAATCCACTATATAAATCTATGTGGTTTGACAAATGGCAAGT
 TAGTATTTATATCCTTTACTAATCAACAAATGGAAAATCAAAGTCGCCCATCTCTACGCA
 TGTTTATTAGTGATGACAAAATATCCAGTACCAATATTGATGAATTTTAGCATCTTTGCG
 ATCCTGATAAATATCGAATATTTCATGATCCAGATATAAATTTTACCTAGTATGTGCGA
 ACTCATTGTAATCCTTATTCTCTTTTGATATTGATAGCAATATAAACTGATGAGAAA
 20 GATAAAATCTTTTTTCAATCAGACAGATAACACAGATTTTT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 405>:

GNMFE17TF gnm_405

GTATCCAAAGGAGGCTGTGCAAGGCAAGGCATGAAATCGAGCAGTCCGTATTGTTTGAC
 25 TTTTGCGTGGTCAATGACGACTTGGCGGAGCGGAGGAGGATTGCGCCATATTGTGAAT
 GCCTGCCGTCTGAAAAGGTGCGGCAACTGGGGTTTATTGCAATTTGTTGAAAAATTCC
 TAGAAAAAGCGGAAAAATACCGGTTTCCCAATTTAAATATTTTGAAAGAAAGCAATAA
 TATGGCAGCTATTACCACGGAAGACTGTACCGGAAAAATTTCCAACCATTTTGACCTGAC
 ATTGSTAACGGCTCGCGGGGCCGCAACCTTGAAACGCGCAACACGCGCTTGTGACAA
 30 TGTCCGCACTACCAACCGACCGTTACCGCCTTAAGGGAATCGCCGCGGACATATCGG
 TACGAACCTGTTGACGCGCAATAAATAAATTTCTGCCGAAACGCAACGCGGAACACTTTG
 CCGCGCTGCAGTCCGACGGTTTGAATGAAAA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 406>:

GNMFE18TF gnm_406

CTTTGGATGAAGATGGTGAATGCACGCTTTGGTCGACGGGTGCAATGCGCGCTTTTCG
 ACTTGCCCGACCAATAAATTTTCATACAAAAACAGGGCTGTTGACGTTGAGGATGCGGTCG
 TTTTACCAATCAAATTCAGCGCAGCCCGCTTTGCCGATGGCGGTAAACGGCGGAATG
 TCCTGCACTTGGAACACGCTCTTTGGCTCGTCGCTTTTGCCGGGTGTAAGGCGCATGTAC
 40 GAACCCGAAAGCAGCGTACCCAAACGCGTTACGCCGCTTTGGTCGATACGCGGCTTGACA
 ACCAAAACCTGGGTAAACCTCGGATAAGGCCGAATACTTCGGCATTGATTTGGGCGGTTA
 CTTCAACGCGCTTTTGGTCGTCGCGAGTTTGATTCCGGGTAAACGCGTCCGACATCGATGC
 TCAATACTTTGATGACCGTATTGTTGACCTCAATGCCTTCGCGGCTGTCATCAGGAGCG
 TAACACAGGCCCCCTGTTGCGGATTTCCTTAACCCA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 407>:

GNMFE54TR gnm_407

```

5 CTCGGCTACCCCTGCAAAATTCAGATTCCCGTCTGCGGGGAATGACGATTCATAAGTTTC
  CCGAAATTCACATAACCGAAACCTGACAGTAACCGTAGCACTGAACCGTCATTCCCA
  CCACTTTTCGTCAATCCCGCGAAAGCGGGAATCCAGAATCTCGGACTTTCAGATAATCTT
  TGAATATTGCTGTTGTTCTAAGGTCGGATTCCCGCTGCGCGGGAATGACGAATCCATC
  CGCACGGAAACCTGCACCACGTCATTCCACGAACCCACATCCCGTCATTCCCGCAAAAG
10 CGGGAATCTAGGACGCGAGGTTAAGAAAACCTACATCCCGTCATTCCCTCAAAAACAGAA
  AACCAAAATCAGAAACCTAAAAATCCCGTCATTCCCGCAAAAGCGGGAATCCAGTCCGTTT
  AGTTTCGGTCATTCCGATAAATTCCTGTTGCTTTTCATTTCATAGATTCCCACTTTCGTTG
  GGAATGACGGCGGAAGGTTTGGTTTTTCCGATAAATCTTGAGGCATTGAAATTCCTCA
  GATTCCCGCTGCGCGGAATGACGATTTCATAAGTTTCCCGAAATTCACACATAAGCGAA
15 ACCTGACAGTAACCGTAGCACTGAACCGTCATTCCACCACTTTTCGTCAATCCCGCGA
  AAGGGGAATCTAG

```

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 408>:

GNMFF86R gnm_408

```

20 GAATGACGATTTCATAAGTTTCCCGAAATTCACATAACCGAAACCTGACAGTAACCGTA
  GCAACTGAACCGTCATTCCACCACTTTTCGTCAATCCCGCGAAA

```

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 409>:

GNMFG09F gnm_409

```

25 CCGACTACGATTACTTATAAAAAATGGACAGACAGTAATGGTATGCCTGTTGAAATTG
  CAATTAAGAGAAAAAATAGTGTGTTGCACAGACTATTTAGSTTCTCGAAAAAGAAA
  CTATCCACTTAGAACCAAGGTACTATGTATCCGCAGCTGGATAGATGATCAGCTTCAATG
  TTTTGAAAAAATGGCTCTTTATTATGATTATCCAGATGAAATGGGSTCAAAAAGGGGTG
  TACGACAGTGATTGATGCTGGGACAACAGGTGCTGAARACATTATGAATTTTATGACTT
30 AGCCGCAAGCAAAAACAAATGTTTTGGATAGTCAATATTTCTAAATGGGGCATCGTT
  GCTCAGGACGAACTCGCAGATTTAAGTAAAGTCAAGCGAGTT

```

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 410>:

GNMFG29F gnm_410

```

35 AAATCAGAGAAGCTACTGCGAAGTTGCTGCTGAAAAAGGTGATCAAAATGGATAAGCGT
  TCGTGCTATGATGGATTAAATTCGTTGAAAACCTGATTAGACAGTTTCAGTGACACAATT
  AAGAGAAATTAAGCAGGGCTCCATGAGTTGGTAGAAAAAATACCAGCTTGGAAATCGG
  AAACCAACGCTTACGAGAGCATCTCCAAGAACTGAATAAGTAGCAGGAAATACAACCTGA
  AACTGAAAAACAAGAGCTATCAAAATCTCGTATGATTTGGAAAAACCTTATGAAGAGGG
40 CTTCCATGTCTGCAATATTTTATATGGTTCAAGACGTGAAATGATGAAGAATGTGCCTT
  TTGCTTGATGTTATTTATGGGAAC

```

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 411>:

GNMFI01F gnm_411

CCTGTCGACCCGATGGTTATAAAATCGAAGTCATTGTCGAGTGTTAAAAAGTTTCACTT
 GTTCACCTACTGAGCTTTTTGTGTTTGAGAGCTGTCGAGACAAAACCTTGCTCGACTTC
 TTCTCAAAACACTTTTTTCAAAAAAAGTGCTACAATAGAAGCTATGAATTTATTGAGGATG
 TGATGTTATTATGACAAAAAAATTTATGGATCGCTGGCAATCAACTTTGACAGGCAGC
 TGAAGTGTTTACGGTAACCAAGTGACGTACACCCACAGGTTTGTGACGCGCTGTTCA
 AGCCGAGGTGGCGTTCCTCTGTTTGCCAAATTGGCCCCAAGAATTAGCCGCTACGTA
 TATACAACAAATTGATAAA

- 10 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 412>:

GNMFI03F gnm_412

CCGGIGAGTTGCTGCTTTTAATATACTCTCATCTTTTATTGTTTCTGCTTCTGTATTTT
 GCTTTCATATTCTTTTCTAATCTTTTACTTGATTACTTAAAGTTAAACTCTTTTCATT
 GATAATATCTTCGATGGAATTATTACTGAATCTTTAATTTATCAGTTTTCGATAAAG
 TCCGTATAATTGTGTAAAAGTAAAAGGCCATATAACAGTCCTTTTACGGTACAATGTTT
 TTAACGACAAAAACATACCCAGGAGGACTTTTACATGACCCAGTACATTTTACACTGAA
 AAGCGAAGAGATTCAAAGCATTATTGAATATTCTGTAAAGGATGACGTTTCTAAAAATAT
 TTTAACACCGGTATTTAAATTTTCCAAAAAACCC

- 20 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 413>:

GNMFI04F gnm_413

CCGGAAGAAAAAAATATTACTTTAGTTGAGTTAAGTGAGGAGTTAGGTATTCACGTTT
 CACTCTTAATAGGTATGAAAACGAAGATAGCGAACCAAAACAAGAACTTGGGAAAAAT
 AGCTGATTATTATGGTGTCTACGGCTTATTATGGGGATATCCAACCAAAAGGTTAG
 CGAAGAAAAAGCTTTGACGGCCGCAAGAAAGTTTATCAAGTCTATCTTTCCGACGACGA
 TTTAGAAAAAGAAATTCGAAAAGCTCTAATGTATTTTATAAAAAATGATTAGATAGTGT
 CTTAAACCAAGCAATGCAGCAGTATTTTACTATCCAGCCGTTGAATGGAATACAGAATT
 TCAATCTT

- 30 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 414>:

GNMFI05F gnm_414

TGC GCGCTGAITCTAAATCATTTTGTAATCGICGTTACGGGATAATCGCTGCTATTTT
 CCAAGTCGTTTTGCGTTATTATCTTTTATAATCTATCGGCACAACTCGTTGACGGT
 TATTCGATTATGTACTTATTCTCAGGATTTCTAGCAACAGTTGTTAAACGGAAACGGAT
 GAGTGAGCAAGTTTTCCAGCTTTAATGTGGGTAGTGGTCTTTCCGTGTTTCATGGCGGT
 TGCTTTAATGATTTATCAAGGGATGAGTTTAAACAGATGGTAAACGTGGACAGCTTTAAT
 TTGTGCAAGTGCAGGAACGGTACTTTCATTTTGTAGCACAATGGGCTGTCATCCATATAT
 CGAATTATTAGT

- 40 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 415>:

GNMFI07F gnm_415

CCGGCCTATCGATTTCCCCACATTTACAGTTGGCACTGGCGGTGGAAGCGTTATGCCCA

TAGTGGTCTATTGTATTGGATAAAAAATCAAGGACTATTCTCTGAAGAGTTAGCATT
 ATTTTATATAGTCCCAACAAAACTAGCTAATCCACCCAAAGAGTGGCCCTCATACAGC
 TTGTGTGAAGGAATCGTCCCGGTATGCAACGTAGCATATTGCATACAGACGAAGGC
 ACGTCATCAAAAATCCTTAATCACTTTGTTACCGTAAAAAGATGCTCTGATTGTTTAGG
 AAGTAGAGTCAATGAACGTGTCGTAGCTGCAAAATTAATCAGAAAAGTATTGCTGATGC
 TGTGACATGCCACTCAC

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 416>:

GNMFI08F gnm_416

ATTCACCACTAATCGTTAAGCACCGAAGCTTCAATCAAGCAAGGGTGCATTATTTTGC
 TTCCCTTAGTCAATCGAGCAAGGATATCGGTTGTATCAAGAGCATCATTCAATCGTA
 TAACATAAGTGGTGGATATTAGACTATGTTGGAAAAATGGAAGAAGTACAGCTTTGC
 CTTAGCGGAATCTTTTCAAAGAAAAATCAGATGGGAAAAAGTGACCTATTCCGAATCC
 AATCGCTATTAAGGAGAATGGTGGTTGGCGTTATAACTATGGAATATGTTTTATGTAAT
 GTTAGTGAACAATATCTTACTACAACGAAGTTTGATGATAAAACCGTTCAAGGAATTT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 417>:

GNMFI09F gnm_417

CGGAGTTTTGATGAAGATTGTTATCAAGAGTGTATGATTAGGTTATATTAGCTTTGAAA
 AAGTTTGAATAACGTGAATGATACATTTTGAATAACAGACTCCGCTACCACTCTTTA
 TTATTACTGTTCAAAAGATATGTTCAAATACACTTAACTACTTTTGTAAAAAATATAAA
 AAATACTGAAGATTACTTCATTTTATTAATTTAAATCTATTGAATCATGTAGAGGTGGC
 GTTAACCATGATTTATTTTATTAGGCATGTTATAGGATGTTGCTTGGTATAACGAT
 TTTAAATTGTTAGCCATTGCAAAATATGATGATAGAGTTCTGGAAGAAATTAGCTCTT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 418>:

GNMFI10F gnm_418

CCGAATTTTCTTTTACATCCGAAGGTTTACTACTTCATTATTAAGATGTTCCCAACA
 ATTTGCTCTGGCGGTGCCGTTTATTATAAATAGCGTAACAAATACGATCTAATGATTTT
 CCAAGAAGTGATTTCCCGACACCTTTATTGTACTGTTGCCGTATCGTCTACAACTACG
 GCATCAACATAGAAATAGAGCCCTTCCATATAAATAACAGTGTCTGGAACAAATATTGT
 ATATATAAAGGTGTCAAACCAACAAACAGCTCAAACGTTGAATAGGTATAGTAATT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 419>:

GNMFI11F gnm_419

CCTGATTTTAGCTTTATCGAAAAACCATTAAATACGAAAGGAGCAACTCGTGAAGAAATT
 ATTCAGGATCAATTGGTTTTAGCTGGGGACCGTCCAAATCAGAATTGGTTGGTACGTGAA
 AAGGATTCTGGGGCTTTTCATTATACCAACAGTATTAGAAGAAAGTAATCAAAGCCCA
 ACACATCATGACGGTTAAAAACAATGAATGATTGTTAAATGTTGGAATTGGGCATGGGG
 CAATCGTTGCTTTCAAGAAACGGATTACTGAAAAAATTCCTTTCCAAACGTTAGGTGAA
 AAGTATTGGCGTACCTTTAAATTATTAAACACGGGGACATTTAAATTCCTCTGCTTCA
 GAAGTAAAAACAAGCAA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 420>:

GNMFI12F gnm_420

5 CCTACTAGAAGCAATCGCGCAATATCATCGGTATGCAAGCCTGTTGTTGGTTCATCCAGA
ATATAAAAGTTTTTCCCATTTAGAAATTTTATGAAGTCTACTCGCTAGCTTCATCCGCTGT
GCTTCCCCACCAGATAAAGTAGTTGCCGGCTGCCCAATGTCACATAGCCTAAGCCTACA
TCCACAATTGTTTGAATTTACGATGAATTTAGGAATATGTTTGA AAAATCTACGGCA
10 TCTTCCACCGTCATATCTAAAATATCAGAAATGTTTTGSCCTTTATAATGAACCTCTAAC
GTCTCAGAATTATAACGTTTGCCATGACAACTTCGCAAGGCACATAGACATCAGGTAAA
AAGATGCATT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 421>:

GNMFI13F gnm_421

5 CCGGGGCTTTCARATTGGCTAGCTCTGTTCTTTTTTCAGCCAAACAGTTGTTCTTGTTAG
CCAAATCGCTCTTTTGCTTTTCAAGCATCTCAGCTGGAATTCCTGGTTGTTGCTCCAAT
GCGCAAGTGCTTGTTTTCCCGTTTCCAGCGCTTGCCGACCTTGGTTAATGTCCGGCTGAG
CCGAATCAGCGAGAGCCGCAACCTGTTCTCTGGCGATTTTTAGTGCCTCTTTTACTT
GATTTAAGGCTGCTCTCTTTCTTTTCATAATCAGAGGAATACGTATTTTGATGTTTTA
10 ATGAACGAATGAGATTAGCAATCTGGATACCGTTGACTGTCAAAGGCTTTTTCCGAAA
CCACGCCAAAA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 422>:

GNMFI14F gnm_422

5 CCGAATTGGAGGGTAAACCTTTTTCAATTTTTGTTAATGCGAGGAGAGAAAGTTACTACGG
AAACATTATTAGCCGAAGTTGATTTTGATCAAATTAACAAAGCAGGAAAGATCCATCTG
TCATAGTTGTTTTTACTAAACCTGAACAAGTTAATGAAGTCATCTTAATAGTTATACAA
CTATATATGGTGATTCGTGTGGTAAAAATTATACCTTGACGTAGAGTTAAGTATGTTATCG
GATTAATTTAAATGAATAAAGGTGATTATAGACTGTGAGTTATAGAATTTAAGTAAAT
10 TATATTAAACAAAACACCTACTATTATATAAATCAGTAGGGTGTCTACTATATCCGAA
CTT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 423>:

GNMFI15F gnm_423

5 CCGTTTTGCAATTTTACTACGTTACTTACCAGTGAAAAACATTTCCCTTATTTAATTC
TGTTTTTACTGTAACGTCTTACTAGGAACAATCTTTACAAACATGCAACTTTTAGGAAC
ATCTGTTGCGAGCGTTGTGAAGAAGCTTCAGTGGTGATTTAACGCACTACCAATGTTAGC
AGTCGCTTTAATTGGTTTCGCTTTAGCCGCAATTAGCTACAAAAATGGTCAAAATGATTCC
GAGTGGGGCAGCAGCCAAAAAAGAACATGCAGCGAATGATTCAGACGAAGGAGAGATTGA
10 AGATGACGAAATCTAATTATAAATTGACGAAAGAAGATTTTAAACAAATTAATCGCAGAA
GCTTGTTTACTTTCCAAATTAAGGGGGGGTTTTTTT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 424>:

GNMFI16F gnm_424

CCAGCCATTGCACTCGAAGAAGTGTGATTTTTTAACGGAAACAATTAAGAACCGGAACGCA
 GTAGTAGTTCCGTTCTTTCAAAAAGAGGCGTATAAAGGGAGGAAGAAGGAATGGAATTT
 5 GTAATCATTTTGCTGAAGTCATTGCTTATTGGTGGTTTACTAGGTTTGCAGCTGGCGCA
 GGCCTGCTCGGATGTTTCATGCACCACAAACGCAAGGGTAGGGGCATTAGAACATTA
 GAGAAGTGAACGCGGCACAAGGAGATCCAGCATCACACTTTCTTTGGTTTAGGTTTT
 TCTTTAATGCTTGGGCTTCGGCCGTCGGAGCAGGGCCCTTACACAAGATGTGACCCAC
 CGGAATTGTTT

- 10 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 425>:

GNMFI17F gnm_425

CTGAGATTATCATCATGTAAATATACAGATGAAGCGATTAAACGAGCAGCAAACTTAT
 CCAATCGTTACATTCAGATCGCTTTTACCAGATAAAGCGATTGACTTGTAGATGAAT
 15 CTGGTTCAAAAATGAATCTAATCATCCAACTCGTCGATCCAAAAACAATTGATAAAAAT
 TAGCAGAAGCGGAACAACAAAAACAACAGCTTCCGCAAGAAGATTTGAAAAAGCGG
 CTTATTATCGTGATCAATCAATAAATACAAGCAATGAAGAAAAACAATCAGCGATG
 AAGAAACACCACTCATCACTGAAAAAGATATTGAAGCCATTGTGGAACAAAAAAGTGGCA
 TTCTGTCGCTGACTTAAA

- 20 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 426>:

GNMFI18F gnm_426

CCTGTGAATAATCCAGCCAAATTAATCGCTTAACTGCCTTAAGTCTGTGGGAATTAAC
 TTACTAGTTGGCGAACATATTTGCAATTATTTACAGGGGAACATTTAAATCCTCA
 25 TTTACTCGTTTAGGTATTGATAAAAATATTTAACTCGTACTTTGGCAGATGCTGGGGCG
 GCAGTCAACTCGTTAATTCCTTGGGGAGTTAGTGGTACCTTCATTATGGGAACGTTAAAA
 GTTGGTGCCTAGAATACTTACCATATGCTTTTCCCATGCTTTGTCCCATTAACACC
 GATCATTTTGGGGATATCTTAAAAAACAACAAGGGGAAAAACAAAAAGCACCGAGGACT
 A

- 30 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 427>:

GNMFI20F gnm_427

CGAGGGACTTTACAATCAGTTGGTCAGGTTGTGCCAGTGCCAATATGGTCAATGAGAAC
 GCAGTTCAACTTGCATGCTCTTTAAATATGCGGATTGTCTACTCGTAGCAGTTGTC
 35 TATTTATTTGGACGTTTCAAGCAAAGTAAGACGSCAGAAATCAGAGCTGAGTTGGTAGAA
 GTCACCAAAAAAGCAGCGCCCTACTTGGTATGTAGTTGGCTTTTCATTGCCTGTGTC
 TTTAATAGTTTGATTCATTCCCGCTCGTGATCAGTGAGACTGCTCATTCTTTAGTTCT
 TGGTTTGAATTAATGCTTGGCAGCAATCGGGTTACGACTCGATTTAAAAAGTTTTTC
 CA

- 40 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 428>:

GNMFI21F gnm_428

CCGGCGCAACCAACTTGAATGGCCGAGAATATGTACAACGCTTAATCGCAGCTGCAGGTA

5 TCAACAAGACTATAGGACGTCATTAGCCCAAGCTCAATTAATTAATTGGTGTATGITCA
ATGGGCAATTGGTTAGGACAAGTAAGTCCATTAAACAGTTGATGAATTTAAAGTTGTCAGCT
CGCCTAAAACAGCTGCTTATGCGTTTGAATTAACCTTTGAACGTCAGCTGCAGCACATC
CAGAAAGACAAACCTATGCACAGCATGGTATGACAAATTCAAAGATTTGAAAGCTTCTTA
CTGCAACAGGAAAAGCTGGCATAGAACATTTGGAGACCTTAATGGGCAATGGCTTGGTA
ATGGGCAATGTTATGCCG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 429>:

GNMFI22F gnm_429

10 CGAACTGGTTGCCAAGAAGCTCTACCAAGACTCGACTGCAGCAGTTAATCGAACTTTCC
ATATAAAGAGCAACTTTTACCATTGTTGGCGTGACACCAATACCAAGCGGTGCCATTGG
TCCAGGTAATGATGACTCATTTGCTTTATTTCCCAAAAAGACCTATGAACATTATTTCCG
CAAGCTAAAAGATACATCTCACTTGAACCTAACAGTAGCACCTGGCTATCAACCGAGATCA
15 AGTATTGAAAGAAACAATAAACTCTCTCTCAACAAGGACCATGA AAAACAGTGGGAC
GTATCAAGAAATATAATGTTAAAGATACCATCAAGAAATGGGCTCTTTATTAATAATTT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 430>:

GNMFI23F gnm_430

20 CCTGATTACGGTCGTTATTATGATGCCGTTTATGAAACGTTGAAAAATGGTGCACCGCAA
CTAGTAACATAAAGAGCAAGCATTAACTAACATCGAAATTTAGAAAGCAGGTTTTCTTAAAC
CCAAGTCCAAGTGTTTATCATTTGAAAGAAAACTAAAGCGTATTTAAATGACTTGAAAG
CGCCTGCCCTACAGTCCAGACCACTGTGGGGCAGGCGCTTTTATTTATAAAGAAATGTGTA
ATTTTAATATAAAGAACGTATATTTGTAGTAAAAATAAAAAAGGAAAGACATCTTAGTA
25 GCACACTCTCCCAAGAAATTGCTACTAAATGTCTTTGTGTAGTCTCGCTCAATTGAAGA
GCCTTAATAGGATAT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 431>:

GNMFI24F gnm_431

30 CCCCTAAGTAATGGTCAATTCGGAAAATATCTTGTCAGGAAATGCAGCACGAATTTCTT
CATTTAATTCGTAGGCAGATTCAATAACAGAACCAATGGCTTTTCGATAATTAGACGAT
CAAAGCCTCTCTCCGAATAATATGTTGTGATTTCAAGTGATTAACAATGGTTCCAAAGA
ATTGAGGGGCCATAGCTAAATAGTAAACATGATTGCCCTTCTAAGTGGTATTTGTTCAATTTA
GGCGATCAGATAATTCTTTTAAGGTATTATAATGTTCCGATCATTACATTAATGTGATT
35 GGTAATAGAAATGACTAGAAAATTCAGTTGCCTCTTCGCCGTGGGATTTAAGTCTTGAA
TG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 432>:

GNMFI25F gnm_432

40 CCGGTTCTTTCTAAAGGTGAAAAATAAGGAAACGCCATCTTCGGTTCGATGACTAGCCAAAG
GCATAAATGTTTTCCCATGACTTGATCTTCTTTCATGGTCCCGGCACAGTTAATAA
GCGACATTGGACAATCCTTTAAAAATGGGCAATTAATTTGCACACTTGGTATCGCAATG
GCACCAATCACAGGTAAGTTTTTGTTTTCAAAATGGGCTTTCATCACCGCTTCTGTGCTC
AAGGACTCAACTGAATCAAGTCAACCGTTGTTTCACGAGCCATATTTTCTTCACATCA

GCTGGTTTCAACTTGCTAACGGCGTACGAGCGGCTATTTGTTGAACCACCCAACACTACGT
ATCTGATTGTTAAAA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 433>:

5 **GNMFI26F gnm_433**

CCGGCGTAAATAAGAAGAAACCTTTACTTTTTTAAACAACCAAGTACCTATGCCAAATA
CAGCTAATGAAATAAATAATGCCAACATACGGATTTCATGCGCGAACCTCTCCTTTGCGCTTT
CTTCGTTGCTGCGGGTCTTTTCTTTTCGAGCATCTTCATATGCAATAAAAAGGCGCC
CGTCCAACCAAGTTGTGCTAGTAACGCTAATGTGCTACTAAAAATAACAAAAATAATTTG
10 AACGCCAAATTTGTCATAATCCCTAAAGAATTAACTAAGGAAATCCCTGAAGGAACAAA
TAAAAATGTAATAACCGTTGATAAGCTATTACCTAGCCCTCCACTTGTCTCCAATTAAAC
AACTATTTTT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 434>:

15 **GNMFI27F gnm_434**

AGTTTATCTTTGGTCGATTTTCTTGATATATATATAATCTTCAGGAATGCTCCTGTCT
GTTTAAATTCGGAATTCAGAAATTATTCTTTTTCGCTAAACTAGTTATTAACCTGGTTAG
TAAAAAGAAGTATTGGACGAATAGTGTGAAACAAGTGAATGATCCAAAGTATAAAGAAA
AATGAAACCGATACCACAAGACAAGACTGTTGCTGAAATGGTAAGTGATCATCTTGCTA
20 AGTTTAGTGCTTAATGTTTAGTTAACTAAGAATGTTGGATTGACTTTAGAAAGAAGG
GACAATATGAAGCGAAGTAAATGGAAGAATTGATAGTAACGGGCATCTGCCATATA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 435>:

GNMFI28F gnm_435

CCCTGTTAAATCGTCTTCATATTTTCCATTTCTGTAAGTGCAATAGCTTTAGGATAATC
GAAGCTAGTTAAGTAAAGATGCGCATTCGGTACTTGCTTTAAGTCTGTAATCATCTCATC
CACATCTTTAGTTGCTAAGCTGAAAAATAAATGAATCGTGTGTTGTGGAACTCTTT
GGCGAAGTTTTCAACTAAGCGTTTTACTGCATGATCATTGTGGGCACCATCTAAAACAA
CAACGGTTCATCACTAAGACGTTCCATTGAGCTGGCCATTGCGCTTAGCCAAACCTTG
30 AGTAATGTCTCGTTCTTTAAATGGCAATGTTGTAGTTGGCAATCTTGTCAAATAATTG
AA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 436>:

gnm_436

CGGAACGAATGATGCCGGAAGAGCGTTTATTAGTGATGCGCCGTTTATGTGCGGAAGATA
CTCCAGCCTTTATAGTATCCAGAGGACTAGAAATCCCGAAGAATTAATTACAGCAGCAA
AAGAAATGGCGTTTCTGTATTACGTTACCGATTTCAACTTCCGTTTACTAGGGGAACT
TATCCAGTTATTAGATGGCGTTTAGCTGTTCCGACAAGTGTCCACGGAGTTTATGTTG
ATGTTTATGGACTTGGTGTTTTGATTCAAGGAGATAGCGGTATGGTAAAAAGTAAACAG
40 CTTTAGAGCTTATTAAACGTGGACATCGGCTAATCGCAGACGATCGCTCGATG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 437>:

GNMFI31F gnm_437

5 TGACCAAGAAACGGTGGTCATTGAAATGGCGAAAGCAACGGAATTGAATTGGTTAAAGCA
GCAGAACGCAATCCCTTGATCACTTCTACTTATGGTACAGGAGAGATGATTCAACATCGG
CTCAATCATGGGCAAAAAAATCATTATCGGCATTGGTGGTAGCGTGACAAATGATGGG
GGTGAGGTATGATTACAGGCACCTGGTGC GCGGTTTGTAGACAAGGAAGGCAAGAATTG
ACACGTGGCGGTGGTGCAATTAGATAAACTGGCGCAGATCGATTTAACACAGTTTGATCAA
10 CGCATTTTGTGCTACCGAAGTTCTAGTAGCAAGTGATGTGAATAACCCACTACAGGGCCA
ACAGGGCGCT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 438>:

GNMFI32F gnm_438

15 CCGCTTGTCAATCTATCACTTTGGTTGTCTTCTTTTAAAGAAGGCAAGATTCTTCTTTA
TAAAGGGTTTGATAGAATTCGTTTGATTGTTTATCCAAAGAAGCTTCATACTGATTGTT
GCTTTGCGGCAGACAAACCTGAATTTATGGCATCCGCTTCGATTTTGTGCCATCAATA
TATAGCGCTTCATTGTCAATTACCTGATTGGTGATTAAATTGACAGCGGAATAGACAAAG
GCTTCTGCTAAAGGTGAGCAGTTGTTTCTGACTTGGAAAGCGATTGATGGTCCGGTAA
20 CTGACTTGTTCGTGGTTTGTAGCCAAACGCATACGATAGCTGTCTATCTAATAGAAATCCA
A

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 439>:

GNMFI33TR gnm_439

25 AAAGCATTCTCAAATCTCTCGCTATACCGCAGACGGTAAACAAGCCGTTGGCGAAATC
AAACGACATTTCATACGGCACACCCGCCGAAATCTCATTATCAAGGCAATAATCTGATT
GCCCTGCATTTCGCTTGCCAAGCAGTTTAAAGGCAAAGTGAACTGATTTATATTGACCCG
CCATATAACACGGGTATGACGGTTTTAAATACACGACAAATTTAATCATTCACCTGG
CTGACTTTTATGAAAAACCGCTAGAAATGCCAAAGAGCTGCTTATGAAAGACGGTTCG
ATTTTGTGTCAATTGACGACACGCAACAGGCACATTTGAAATTTCACTGGATGAACCT
30 TTCGGAATGAATCATTTACCTGCACCTTTATTGGGAAAAAAGACAGGTGCGTCCGA
TGCCAAACAGATAGCGACTATTACATAGTTTGTCTTATGTTACACAAAGAACTTTAAAC
AGTTAAATTAGATTTAAACACGTTTTTCATATGATACAGAGAGATACAAATTAAGTGATAA
GTTTGAACACGAGAGAGGC

35 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 440>:

gnm_440

40 CCGCAATCCATATGTGATGGGCGCAATTTAGGTGCTATTATCCGATTGTTGGTATGA
CACCGTTAAGTTCATGTGTTTAACTGCCTTGATTGGTTGACTGGTGATACCAATGGCTG
TCGCTGCGTTGACTTGTACGGCAGTTCCTATTGTCAATGCGGCGCTATTTAAAAAGTTAA
AATAGGCACAGCTTCAACCCCGTTAGCTGTGGCAATTGAGCCATTAAACACAAGTCGATA
TCATCAGTTTCCAATCCAATTCTTATTACGCAACGAATTTATTTTCAGGAATGGTTAGTG
GCATTTAGTGACCTTCTTTGGCTTAAAGTACCTGTACAGGAATGGCAACACCGTGGG
CTTG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 441>:

GNMFI35F gnm_441

```

5 CCGACATGTGGTCCATCACCCGAGGATGTAACGTTGCTGGTTGGACATTCAATGCTTGCG
  TGTCTTCTTCAAGGCTTTGATAAAACGCTCCGCCACTTCCGGCGCAGTAATTTTCAATT
  CTTTAGCTGCCTTGATAATTTTATCATCGACATCTGTAAAGTTCGAGACATAATTCACCT
  CATACCACGATATTCAAAATAACGACGAATCGTATCAAGGCGATCGCACTGCGCGCAT
  TACCGATATGGATATAGTTATACACGGTTGGTCCGACAGACATACATCCGAACCTTTACGCG
10 CCTCAATTGGCGTAAATACTTCTTTTCTCTGGTCAATGTATTATAAATTTTAATCATGCG
  CCTTTTCCACCTTT

```

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 442>:

GNMFI36F gnm_442

```

15 CTTTAAAGAATTCTTTTCTAATATTGATGAAATTACAGATTTAATAAAGAAAAGATGG
  ATGAACTGGTATTAACTATTGTGGAATACAGCAATATGTTTCAAATCCTCGTTATG
  TCAACGGCGCACATACTACAATAATGCAACGATACGCTATCGCAGCTGCTCAGGTAA
  AAAAAGGTTTAGATGTTTCAAAAAATTAGGTGGAGAAAATTATGTTTTTGGGGTGGAC
  GTGAAGGATATGAACATTACTAAATACTGATATGAAGTTTGAACAGATATATATGGCG
  GTCTATTCAAATGGCTATATTTACGG

```

20

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 443>:

GNMFI37F gnm_443

```

25 CCCGTTTCACTCAATTACAATCTCTACCAACCAAGTAGCGGACCATCTAATTGATTAGG
  GCTGGTTAGTTCCTTTGATATGTGAATCAGCGGATTTACCTTTTATTGAATCCGTTAG
  TAAGAAATGCGGCCCTTAACAGTTTGCTAAATTATCGCGATCCTTTAGGTACGCATTTCA
  ACGAGCAACCGCTGCCGAATGGCTTCAGACACAAGCGGTTCGGACCAATGCCGAAGAAGT
  TGCCATTGTATCTGGTGTCCAGAATGGACTGGCCGTGACGTTAGCCGCCGCTTTTCTCC
  AGGTCAGCGGATTGGCGTAGATCGATACACGTATTCAATTTTATTGAACTCGCACAGCT
  TTATCATTTAGAAAT

```

30

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 444>:

GNMFI38F gnm_444

```

35 CCTGAATTAGTTATGATCATTTCTACGCCAGCTATTAACTTGTGACGACTGTTCTATT
  GAATATGTCATTTTTTTTATTGTCAGCATCTTTTTATCTAGTGGAATTTGGGGTGATT
  GAGTTTATACATTGTTGTTTACATTCTTTTTGAAACGAAGAGTGAACAAATTAATAGT
  CTCRAAGTGATAGGTGATAGTTTATTAATGATTTTGTACTTTTTATTTTTTGATTTT
  CGTTATGGTTTAGAATTATTTCTAGCAAACCAATTGTGGAGTATCTCCTATATGATTCCT
  ATCCTTTTTTTCTAATAGTGGTATGTTTAAATGCTATTAGTATAGGCCTATTAAAGC

```

40 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 445>:

GNMFI39F gnm_445

CCTCAATTTTACTGTTAGCTTAAGCTGATTTGAATAGAGTATCAATTTCTTCCCACG
 GGGAAAAGTCGAAGAGACCAATTTCTCTTCGACTTTCTTTGTATAAAGCAGAAACAACCTT
 CGATTCCCTTTAATCGTTACTGCAGCTGTATAGGTGGACTGAAAGTTGTTGCCATAAGGAA
 5 GCTTCCCTTCAACTGTCGGTGATCCTGTTCAAGAATATTATTGAGGTATTTCGACTTCC
 AATGCTTCACCTTTTGGTATAGAATTCCTTCTTTCAGCTCTTTGATCGCTTTTAAAG
 AAGGAGCATATTTATCTGTTACAATGGAACGTGGTTGACCGTAGACTCTGATTAGACGCT
 TGA AAAAGAGCTTTA

10 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 446>:

GNMFI40F gnm_446

CCAGAAATCATGCAATGTGAAGTATCGTATGCCTCATTGGAAAGCTATTTAGAGATA
 TTCATCGCATGGTGGAAAATGGTTTACTTTCTGAAGAAAAAGAAATTTATGCGCCTGTGC
 GCTTACGTGGCGGGAACAATGTCTGATCTGCCTAAAACAGGTATTTCGCTATATCGAGT
 15 TCGCTAATTTAGACTTAATCCTTTTTCACGTTTAGGCATTGTGGAAGATACTGTGGATT
 TCTTACATTATTTTCATGTTGATTATTTGTGGACAGATGAAAAGAAAGCGGATGAAT
 GGGTGA AAACCTGGGATATTTTAAATGAACAAGTGGCTCTTGGTCATCCTCATGAAACGA
 nTTAA

20 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 447>:

GNMFI41F gnm_447

CCTCCTTGGCATGGCAACTACTGGAAGTATGGCAAAATACACAGTGACTTTAGAGCCAGG
 GAAGGCCCTCAGCTAACGAAACAATACTGTCTAGCGAAAAATGCAACAGGAARAAGAAAG
 TCAGCCAGCTACAGCAACTACACAGTCGACTTAGCCACACCAACCATTGATTCTATTAC
 25 CGGAAATTTCTAGTAAGGTTACGAAATCACTGGAACGGCGGAGCTAAAAACCACTAATTGA
 TGTCCGTGACGACGAGCAACCATCATTGCTGCTACAACCTGCTAACGAAACCGGCCAATA
 TACGGTGACTCTACCAGCTGGCGTGTGACACCAGGAGAAACGATTACGATTATTAGCAA
 AGATGGCGCAGGTAAnTGAA

30 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 448>:

GNMFI43F gnm_448

CTGCTTAAAAATACTGTTTTAGTGAGTTTAGGTACGAATGGTCTTTTACAGAGGCACAA
 TTTGATGAATTTATGAAGCGTTAGGTAATCGAAAAGTTTATTGGATTAAATGTTCCGCTC
 CCAACTAGAAGATGGCAAAATCAAGTGAATAGTTTACTTAGTCAAAATGGACAAAAAATAC
 35 GATAACTTAACCGTCATTGACTGGTTTAATTATAGTAACGCCCATGATGATTTGGTTTTAT
 GATGACCGAGTTTCATCCAATGTGGCAGGTGGCGAGCAATACACACACTTTATCGCGGAG
 AAAATTTTACAGTAGCAAGAACTTCAGCTCAGATGAAAGGGCTGGAAGTTTTTGTG
 ATAGGAAAAGCAAAT

40 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 449>:

GNMFI44F gnm_449

CCGTGGAAAACTTTTGTAAAGCTAGAGCTAATAGATAAAACGAATCGAACGCACATTAT

TTCGACAAAAACATTTTGAGCGSTTTTGGGCTACTCTTAAGCCTTTAGAGCAACAATTGC
 TCATTAGGCGATTCAAGTATAAAGAAGAGGTTAATTGCCCTCACAGGCTTATAGAGAGCG
 TATTAGATGAGATTGAAGAGATAGAACAGCTATTGTTTGTATGAAAAATATAGAATTAG
 AAGAAAACGAGCTTCCGACGATGTAGAAGAAACTTAGAGAGGATGTGTGACTCTTTG
 5 CTTTATGAACGTATCCGTCAGAGTTTCATCTTGACGCTGGATATATTACAAAAAGCA
 CG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 450>:

GNMFI45F gnm_450

10 CCTGATCCTAAAAACGGCTTTGTTTATAGCTTCCTCATCGTTGAAACAATTCAAATGGT
 GCAGAAATCTCAGCGGGGAAATTAGCACCCAATGAACCTAGGTGCACAGCTGTGGATGAT
 TATACATTAAAGGTGACGCTCAAGAGCCAAAACCGTACTTTACGTCCTTGTGTAGCTTTT
 CCGACATTTTCCCGCAAAATCAAAAAGTAGTCGAACAATTTGGTCGGGACTATGGAAC
 GCTAGTGATAAAGTCGCTATAAATGGTCCGTTCTGGTAAAAGATTGGCAGCAACAAG
 15 ATGGACTGGCAACTAGCAAAAAAATAATCGCTATTGGGATCACCAGAACGTCGCGTCAGAC
 ATTATCAATTATACA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 451>:

GNMFI46F gnm_451

20 CCCCCATTTTAGAACGGATCATGAATCAATATCAAGAAATAGCTGCGGCTTTACGCCAAG
 CGTTGCCGCAAAATTTCCGCAAAAGAATCTATCGGAAGAGGAAATTGCCTACATGGTGC
 TTCATTGTCGCAATCTTTAGAACGGAGTCCCAAAATTATGGAAGTTGATATTGCTGGTT
 TTTCTCCTACGGGTTGGCTTCGACAAGTATGCTGGAATGCGATTACGCGCGTACTTTC
 CTTTATCAACCAGATTCATTTTTTCGGATTGCGGATTTAGTAAAGTGGAATGTTGAGG
 25 AAAACATGACTTAGTGATTTCCCATCTCGTTATTACAGGATCAATGGTAAATATAAT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 452>:

GNMFI47F gnm_452

30 CCCGTTGCGCTACTTGCTGATGTTGCTTCCTTAGCGCTACTTGCTACTGTCGGACTACTT
 TCAATCGTGATGTTTCCGCAACTGCGGTCGCGCCAGAAAAGGCGTTAATCACTAAAGAA
 TCACACRAGCCAAATGGTTGCTAATCGTTGCCACTTAGTTTGCTTCATGTCGTCCTCTTT
 TCTCTGGACCATTCCGACAAGACCAATCAAGACAAGACCAAGAATGCTCAGGTTTGCTG
 ACTCTTGCTTCCTGTACGAGGGAGCTGCGAGCCAGCTGTGGTGGTCTGTGCGAACCAAC
 35 ACTTCGTTGATCTCTTGACAGGAGCAGCTGGTTCTTGCGATCCGACGCTGGCTCATC
 TGTTTTCGTGGGGGGC

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 453>:

GNMFI48F gnm_453

40 CCTAAGATTTGGCTTATGAGCTTGGGACAGCGCTTAAAAACGTTTGTCTCTTTGCTGATA
 AGTCCATTTTTTATAACGGAGGTGGCTAGAGTGAAAGCCTGTGGCATTATCGTGGAAATA
 TAATCCCTTTCATAATGGACATCGCTATCATGCCCAACAAGCTCGGCCAACAAAGCGGACT
 GATAGTAGTGATTGCTATAATGAGTGAAATTTTTTACAAGAGGAGAACCAAGCCTTACT
 AGATAAGTGGGCCAGACAGAGAGACTTTGCAAAATGGTGTGGATTAGTCATTGAATT

GCCGACAGCTTGGTCGGTACAGTCTGCGGATTACTTTGCG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 454>:

GNMFI49F gnm_454

- 5 CCGGAGCGAGTACCCAAAAATCGCGTGGGAACTTTGTCTGAATATATTGCAGTGGATCAA
GCGGCTGTAGCTATGAAGCCGAAAAATTTAACGTTTGAAGAAGCTGCGGCCATTCCGTTA
GTCGTTTTGACAAGTTATCAAGCGCTACATGATATTATGAATGTACAGCCAGGCCAGAAA
GTCCTGATTCAAGCAGGTTCAAGGAGGATTGGAACCATTCGCGATTCAATTAGCAAACTA
GCAGGCGCTTACGTTGCCACCACAACGAGTAGTAAAAATAAAGAATGGGTTCAAGCGTTG
10 GGAGCAGATGAAGTATTGACTATCGGACACAAAATTTGAAGAAGTTTTATCCGACTAT
GATTATGTGTTTGATACAATGGGGGGGACAATCTTAGAAAAAGCTTTCTCAGTGGTTAAA
CCTCAGGGAAGATGTTACATTGTCTAGGCATTCCTCAACGAACGTTTTGCTAAAGAGTAT
GGCTTGGCGCTTTGGAAAAATGGGCGCTTTAAAAAGCTACCCCGAAGATTG

- 15 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 455>:

GNMFI51F gnm_455

- CGGAATTGTATTTACTGCAGAGACAGTTTAAGGAGGACACGCAATGAGCAAAGGTCGGTT
AGTCACTTCGGACAGAGCTTCGCAACGCAGAGAAGCAGAAAGAAAAAGCGGAACGTCG
20 TCAGCAAGAAGAGCAGAAAGCTGGCGAAAAAGCGTATAAGCGAAAAAGAAAAAGAAATTC
GACGTTTTATCTGAAGAAAAAGAAAAACAAAAACCGATCAACAAGTCAAGTAGGAGA
ATACTCAAGCGTCCAGAACGGAGTACTTGGTTAAACAAGGCAATTATTATTGTAGCGAT
TTTATTAGCGGTTGTGGCATATATCGTTTGAATTTATAGAAAAGAGGAATCACTATGAA
AATTGGAAATTATTGGAGCAATGGATCAAGAGGTCAAATTTCTAAAAGAAAAATTGACAGA
CAGCATGTATGGGAACGACGAGCGCTTTATTGTTTCTAGTTCGTTAGGAAGACATGA
25 GGTGATTGTAGTTCCGTTCAGGAATTGGTAAAGTGGCCTC

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 456>:

GNMFI55F gnm_456

- CCGGGGTTGAAGGTGTACATGGAGAAAAACAAGTTGAGAAAAGTGGGCTTAAGTGCCTG
30 GAATGGCTAAAAACAATCCAGAAATTAACAACATAAAGAATCAAGTCTCTATGAACAG
TTGTTTCTAGTCAGCAATGGCAACAGCACAAACGATCGGAATGATTCTGGTCGTTACCG
CTAGAATTATCAACACAGCCAAATTTGCAACGGGCCATGCAAGAGAGCAAGCAAGTGGCG
GTGCGCGCAACATTTAAAGGAGGCAAAATGCACTTTTATCAAGTCTTCCAGAGACGGTT
TATGATACCAGTGCAATTGCGGTGGAAGAACCTCCGTTAACAGCGGCAGAAATAACAGCT
35 ACAGCGATTGATTATTGATTGTGCCAGGATTTGTTTCAATCGTGCTGGCTATTCGAATA
GGCTTCGGCGGTGTTTTATGATCGAATTTGGTACATTTTTCGGGGCATTATGTAGTT
TAGTTTTACGTGACACTCCCATG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 457>:

- 40 **GNMFI56F gnm_457**

CCGGAAAAGTCGCTGGCCTTGGCACCACGAGAATACTTACTTCTTCTAAAGAGTATC
AAGAAAATCGTTGCGTCACAGGAGGAGGATACCATGCAAACTAAAAAATTCATTTGGTG
CCTTCTCAGCTTTTAAGCGGTATTTACTACGCTATCCAAAAGAAATTTATTGGCGCCTTAA

TCTTAGGAATCTCAGTGGTTTTTCGACTGCTCATGACTATTATATAGGTAAATCCG
 TTGATACAAATGGTGGGTAAAGGACAAGTCAATGCTCGGCAACTCATCAAAATTTTAGGTT
 TATTAGCAGGGATTTTACTCGTAACCGTTCTAAGTCAATGGCTGATTCAACGCTCGGTA
 ATCGCGGTGCTTATTATTCGACCACACAGCTGAGAAAAGATGCCTTTGCCCATTTAAATC
 AATTACCGTTAAGTTATTATGACCAAACGTCACACGGMAATATCGTCAGTCGCTTTACCA
 ACGATATTGACAATATTCA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 458>:

GNMFI57F gnm_458

CGCGGTGCTTTATAAACCATTAGAACCGTTAGACACACCAACGATTCAATTTGAAAAATT
 ATATGGACCTGATCAGAACGGGCATATATTTATCGAATAAACGACTAGTGATTCATTCA
 TGGAAATGAGGTTTGAATATGGGAAAGTATTGAATAGAATCGGTCGACTTTATTTATAG
 TTACAATGATCGGCTCGTATACGATGCGGTCGTAGGAATTGATGCGGCAGTCACAAAAT
 ATATGTATGCCAATAGTTCGAATTTTATTTAATAAGCAGTAATACTTGATCTGCTATTAA
 ATTGTAGCATATTTAAATTTATTGACTGGCTGACCGTAGCGTTGGCGCTAGCAACCTGGC
 TCTTGTTCACTTTACGGAATCAATCCGTCAATAGCAGATGCAAACAGATACAAATGATTC
 CTTTAAATTTTATTGGT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 459>:

GNMFI58F gnm_459

CCTGCTGTGCCGTTGCGCCAGAAGGAGCATCAGCTAGAAGTGCCTCAATTTTTCTTGG
 AAAACAGACCATTTTCTCAGGAAATTTTTTCAAAGCGTGTGTTGCGCGCTTTTGCA
 AAATTTTTCAAACCAAGCGAATCTTTTCTACGTTTGATGAGCGACATGGGTGTTAAAC
 AAGAAAGTAACAAACGCTCCATGAACTCTTCAGAAAATAATGTTGATAGCTATCTTAT
 TTTTGATTGCCCATAATAAAATCCCCCTCTAAAAGTAAGTGTAGCAGGAAATCGAAT
 GTTTAAAACAATATGTTCAATAAAAAGAAACGCGTCAACTAATCTCAATAAAGGACTGTT
 AATGGTGTTCTAATAAAAGTTTTATAAAAAATATAGCTGAACTCATGATAAAAAAGGCA
 CAAACCACTATACTTACGTTATGCCAATTATCCCGAATTTGGTATGTTCACTACTCTCT
 ACCAAGAGTACATAA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 460>:

gnm_460

ATCTATAATTCCTGAATCTCAAAGATCAATTATCCAGTTAATCTATTATGGCATCTAA
 CAATAGATGATTACAACATAAAATCATTATGGCATAATCACTTTTACCCTCAAAACGT
 TGTGCAATTTAGTCTTTCCATAAACTATCTATATAATCTTTTCTATATCAGTTAAATC
 ATTATAAATAGTTTCACGCAACAATATATACTCTTCTAATACATTTTGTTTATTATCAAT
 ACTACATTCACATAATCTGTATAAATCTAAACCGTGCATTTGCTTAAAAACCTGGCAAT
 ATCTCGTTTTAACAAATTTTGTTCTCTCTGACATAGTAGAATAAATTTCTGGTGTTAA
 AAAAGTTCCTTAAATTTCTTTATAACCTAGTATAGATAAATCATCATAATATACGAATA
 TCTAATATTAGGAATTTTACATTAGTTTCTAAATTTGATTTAAAAAATTATATAITGTC
 TTTTCTTTTGCATAACCTTTTCTTATTAGTACTAAATTTTGTTTAAAAAATGATTC
 ATTATTAACATAAATATGCCACACTATCATAACCACTACCGATTATTTCAATACTATCTAC
 TTTGAAATATCAAAGTAATGCTCAATTAATATTTTCAATGCTTAAACATTTTGGGCAT
 ATCATCATATCTATATCCATTAATAACAATCTCTTTTGGCCTCGTGTAATTCATG
 TCTGGCAAATCTCAATAATTTCTAAACCAAGATTTTGGTATGCCCTATTTGCTCATG
 GATTATTTTATGAGGGACTAAAACTAGCATTAGCATTTCTTTTCGATTTTCAAAAT

CAAAAATCAATTG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 461>:

GNMFI60F gnm_461

- 5 CCTGCAAAGGCTCTTACTTCTTTGATGTCTTTAACTCCAACCTATGCCCTATCACATTT
ATTAAGTTTAGCACCTTTGGTCAGTTATCCCATCTAAATGATCTAAAAAATTAGAAATAA
TTTTCTTTTCTAAAGCTTCTTGCATGTTTGTTTTGTCTAATACGGATTTTAAATCGAGT
TTAGTTGCACATAACTTTGGATGATTAAATTTAATACCCCACTGCTTACTTGCGAATTC
TCCAATAAATCACCAACATCTCTTCATACAATTTATCTATGTCATCGCTAATTCAGGA
10 ATAACTGGTATTTTCAGTACAACGGCAACGCTCCATGATACGGTGGATGCCAATCATCTTTA
ATCTCTTTTCCATGACGTCACCAACAATAGAACAAACACGCTCATCTTCTGCCGACCAG
CTTTGTGTTTGCTTAACACCTATATCCTTTTAGCGATTTCTTACACCTTCTACCGCAAAA
TGTGAATATTCGCTCTAA

- 15 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 462>:

GNMFI61F gnm_462

- CCGATTAATAATTTTATTCAAAAAGCGCGTCGAGCAACAAAAACCATCGGACTTGGTGGC
AATGGTCAGTTTTTTCGGTTATCAATGATTACCGAACACTTAGGCTATCAGCCTTGGGGA
AATGCTTTGTTGGATGACTATGAGTTAACCATTAAATTAATGCTGAAAGAGTTATCGATT
20 GCTTATATGACGAGGCCTTTATGGCTCAAGAAGCACTGAGAGATGTGAACGTTTTATT
CGTCAACGnTCGTTGGGTTCAAGGAAATTTAGATTGCTCAGCGTATTTACCCAGGGTGA
TTAAATCAAGTCATTAAACGCTAAGGCAGAAGTGTGGAATCTATTATTTTTAGCGCAAC
CCTTTATTAATCTCGTAGCGGGATGCTCGTTTTTGCTTTAACTGGGCTTCAACTGCAAC
25 ACTTGATAGGTTTAGGCTTTTCGTTATCGCTTGTCATTAGTTTGTGTTTGGCCGTCAGTA
TTTCGTTAGTTTTCGCGATTTTTT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 463>:

GNMFI62F gnm_463

- CCCCGTTTGCAGCTGCGCAATGCTTAACGTTAGAAGAAGTAGCCAAACAATGGCTGCT
30 GAAACAATCGATCAATGCCCTGTTGCCATTGAGACAGCAGTAGAACAAATCCCACGAATT
GATTTTATCAGATGAATTGTATCAAAAAGTAAAAAATGGCATGCGTTTGCACAAAAAGAA
TTAGGAATAAAGGCAATGCCAGAATCCTTAGTCGCCTTATTTTACCAAAATCAAGTGGTT
AGTTTTATACATGCCACACCCAACGCATGATAAATTTTGAACCAAGTAAAGTTCTACGG
AACAATTAATAAAAAAGGAAGGAGTTTTTGACATGCAAGTTATTCAACTACATCATCC
35 CTATGAACCCAATCAAAATCCTAATGAAGAAGTCGTGATGGTCTTAGGCTTTTTTGACGG
TGTTTCAAAAGGCCACCAAAAAGTAATTGAAACAGGTAAAAAGATTGCGGAGGAAAAAGG
CTTGAAGTTAGCTGTGATGACCTTCG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 464>:

GNMFI64F gnm_464

- CCGAGGGGATTTGGCCTGATGGAACGGAAAAACAGGGGCAGGGACATCCGCGCCGGATAT
ACGTTAAAAAATTTTATCTTGGAAACGGAAACCCACCGCGCGGTTTCAGACTCGGAAAAATC
AGCAGTCAAGACCGCTTCCAGTGCCGCGCTCAAGACTGCTGAAAAACCGCAGTCTGCAC

CACGGGAACACGCGGTCAACAGTGCGGCATTTCCGCCCTAATAAT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 465>:

GNMFI65F gnm_465

5 CCGGATCTAATCCTAGTTGTCCAGAAATGTACAACGTATTTCCCGCTAAGACAGAATGTG
AATAGGTCCTACAGTAGCTGGTGCCTGTGCAGAAATTAATCATTTTGTGTGATCGTTT
TCCTCCATTCTATGATTCTTTATTTTCAATTAAAGTCCCTGTTTTCCAGATAATCCTTC
TTTGGCTTTTTCTAATAACGTAATCAATGTTTTTCGACCTGGCTTAGATTGACGAAACTT
AATCGCTGCTTCAACTTTTGGTACATTGAACCTGGAGCAAACTGACCTTCTTGGCGATA
10 TTGTTTCATTTTTTCTGTTGAAACATTCCTTAAGGCTCTTGATTTTCTTTACCAAAATT
AATACAAACTTTTTCAACTGCTGTTAAAAATCAGGACAGATCAGCATCCACTTGTTCAGC
CAGTCGTTCACTACAAAATCTTTGTCGATGACTGCATTGACACCTTTTAGTCGGTTCCTC
TCTTGAATGACTGGGTATGCAC

15 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 466>:

GNMFI66F gnm_466

CCGAAGAACTTTTTTTGAACCCACATTGACAAATGCTCAATTGCCCTGCTGGCACCGCC
ACGGTTATCCAAGAGAACTTGGCCGAATATTCCTATGCTCAGTGGTTCGATCAAGGACAA
20 GATCGAATGGCCTCGTTCAGCAAACTTTTCAATTCTTTTGTGGAAATGCCAATCTAA
AATAATTGCCCATCCACATTTTTTCAGGAATGATAAGATGTGACTTTTACCGCTGCA
GACAAATCATCTATAATCAAAACAGTGCTAAGCCTTTCTTAATTCCCTCCAACAAATCACC
ATAAAAAATACCGCCATAATCAGCCAAATAGACACCAATAATATTGTTTGACGACGTTT
TAATGTGCGAGCGGCATGTTAGGAACATAGTTAGCTCTTCAGCAATTGCTTGGATGCG
35 CGTCTCGTTTTCTTCAGTTACCTTTGAACACCATTCATGCGTAAGAAACGCTCGAAT
TGATACCGCTGC

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 467>:

GNMFI67F gnm_467

CCCTTGATTTTTAAGAATAGATACAGTAGCATAGAACAACCTAGTTCTTTCACTGGCAAT
30 CGTCAATGTCATATAGAAAAGAAATGCCCTATCTGTATTATCTGAAAAATCAAAACATCAT
AACCAAATTAGAAAGGTGGTTATTATGATAACTTATTAAACCAACAGGAATTCAGTTAC
TTTCCCTAATTGAATACTTGTATGACAGTAAAGAAAAAGTCCCCATGCAAGTACTCCGAC
GAAAAATATGAATTTTCCCATTACAATATCAACAATTTATTGAATCAATTAACTTTGTAA
35 TTTCTCGAGTCAATACACATGAAATGTACATATTCTGATTTATTAAATCAACAGTCCA
TAGAATTAGTCGCGGATGAAAATATCCCGATTGAGTTAATGAAAGAAGCTGTTGTCGGCG
GGTCACTAACCTATATGTTAGCCCGAGATTACTTTTAAATACGCTACACTTACGCCAAAG
ATTTTGTGAAGAGCCTTTATTAACTTTTCTATTTTTTAACAG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 468>:

GNMFI69F gnm_468

CCAACTAGAAAGAAGAAAATCAACTATATCAGCAATCCATTAAGAAAGCTAAGCGAGCAATT
ATTAATGCAAAACCAATGAAGTGAAGCATTACAAAAACAAGTAGTCGAAAAGAGTGTCA
ACTTAACATGTTAAGAAACATTAAAGTGATAAGAAACAACTATCACTTCTTTACAGAA

ACAATTGCTGAAGAAAAGATGCAACAGAGACAGACCAGTGAAGAGAAATTTAGACACAGC
CGTTACGCTTTCTCAAAAGAAAATTGGCGAAGTGTATTAGAAGCCAAACGTCAAGCAAAA
AGATACAATTAGTCAAGCCAAACCAACAAGTTGCAACAGTTCATGAAGAAATGGAACAACG
TTTAGCAATCTTTACACGCATGAAGCAAGTGGCAAGATAGTACCAAGCTTATTGTGAACA
AATGCAGACAATCAAGAAATGAATCAACAGGAACGTACCAACAGATAGAGCAGTTATTAGC
AG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 469>:

GNMFI71F gnm_469

CCGGTGTTATTATGTTGATTATTCGAAAAGAACAGTAAATGATTATTTCTAATCGAC
ATGAAGTCTTTTATGCGAGTGCGAATGTATAGAAAGAAATTTAGATCCATTAAACACA
GAACCTGTGTTGTTATGAGTCGAGGTGACAATACTGGTTCAGGATTGATATTAGCTTCTCT
CCTGAAGCAAAAAGCGGTATGGTATTACAAATGTGAGTAGACCACGTGATTACCAACAA
CCATTCTCTAAAACACTACATGTTGTTCCACCACGTATGAACCTATATATCAAGCGAAAT
ATGCAGGTAAATAATATTTTCAGAAATATGTGGCTGATGAAGATCTACTGATTACTCG
ATCGATGAATCAATCTTAAAGTGAACCGATCACTGAATCTTTTACGACTGAAGGAACA
CGAAGCCACGTAGAAAGAGCTCGCTCAATGATCCAGAACGTATTAAAGAAAGAGCTA
GGATTGATTGTCAGTAGGTGTGGGAGATAATCCCTGTTAG

20 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 470>:

GNMFI72F gnm_470

CCGGCTCCAACGTACCAACTGTTTTTGAAATGATTGATGATGCCAAAGTAATTCCTGGTT
TAACTTTAAACAGAACTGTCTCTTAACTATGCGATGGAAGAAGAAATGGCTTTTAAACAC
CCGTCGACTTTTTATTGCGACGACCAACCACTTATTATTATGCGIGATCGTTTGGACCA
AGTGAAGCGGGAGTCATTGAAGAAATGGCAGCATTATCAGTGGACAGCGGAAGAAG
AGCACGACACATTGAAACATTAGAAAAAGTAATTGAAGAATCAGATTAAAAAATTGAA
AGTAGGGTGAAGAAAAATGGGAACTTCGATGATGACAAATATTCCGGTGAATTTTTCG
GAACGATGATTTTAGTTTTACTAGGGGATGGCGTCTGTACCGCAGTTAACTGAAGAAAA
GCAAAGCCTTTGCTTCTGGTTGGGTGCTATTGCTTAGGTTGGGCGC

30

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 471>:

GNMFI73F gnm_471

CCCGTCTTAAACGGCTCTACACTAGAGAGGTATGTTACAGCATATCTCTCTTTTCAATGC
TATTATAGCAACAACCAATCAAAAGACCATCAATAAAAATGCCGAGCCTCTTATTTT
35 TTAAGCTCGGGCATTTTATTTTAGGGGCCAGTCACTAAATCCACGTGACGCGGGCTT
GGTATGTTGGCCAGCCATACCTTGGTTGGCTGGCACTTCTAGTTTGTATGTTAGCAAACT
TGAAGTCCAACTGATAGACGTCACTCGCTGTAACCTGTTGTTTGCACACACCGCTGTTG
CGGTATTGTCGGCGGTTAAAGTCAACGCTGCTGGTCTTGCCAAGTGGTGTCTCGTTCTG
TTGGTTGGTTGTAATCGGTAAAGCTGGCAGCAGCGGCGGTTCTTAGCAACAAGCGGGTCTG
40 TTGTTGGCAAGCTGTCTGTGGCTGATTTGGTTGCAATAGCTGGGCCGTTAAACTCCAAT
TGGCTTGGCTAGTATTACGGCGTAAATTAGGGTTGC

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 472>:

GNMFI75F gnm_472

CCGACACAGAAATGAACGCAATATGATTGAAACGAGTCAACTTGTGACGCCGTCTAAAA
 GAGAAGTAGGGGTGTGCAAGCAATGAACCTTAGAAGGATTAAACGACAGAACCCAGAAATG
 AAGCGACTAAAAAGATTGACCAAGTGTCAACATTAGAAATGGTAACCTTAATAAACTCAAG
 5 AAGACCAAAAGGTAGCACAGCAATTGAAAAGGTGCTTCGCGAGATTGCTGCAGCAATTG
 ATGACGGCGCAGAACGATTTAAAAAGGGGCGCTTTAATCTATTGTGGTGCAGGAACGT
 CTGACGCTTTAGTGCTTTGGATGCGATTGAATTAACCCACATATAGTGTGTGCCAG
 AACCGCGCATTTAGTATTTAGCTGGTGGTAAAAAGCAATGTATCAAGCAATTGAAGGCG
 10 CTGAAGACTCGAAGAATTAGCTATCGAAGATTTAACGCAACATCAATTGACTGCCCGAG
 ATGTCGTAATTGCGATTGCTGCTAGTGGTCGGA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 473>:

GNMFI77F gnm_473

CGGAAATAATAGGATTCTCTGCTTTATTAATGTTTATTTTGTCTCTACATTAAGTA
 15 AAATAAGTCCAATAGTTGATCATCTGCGGGTATCACAGCAATCCGTAGCCTTTATTTT
 TTTTATTAATTATTCCTATACTAGCGCACTAAGAGGGTATTTTCAAGGCTCAAAATTATA
 GTTTTCTTTTGGTGTTCCTCACTACTAGAACAAATTAGTTCGAGTAGTTTGTATTTTAG
 TAGGAACCTATCTAATTATAGTTCAATTTAATGGTAG

20 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 474>:

GNMFI78F gnm_474

CCCGGTCAAGTTTACTTAGCAAAAGTTGTGCGCATTGAAAAATTTGGTGCCTTTGTAAAC
 CTAATTAAGGCCAAAGATGGCTTGATCCATATTTCTCAATTAGCAAAACGACGTGTGAAC
 AACGTTGAAGATGTCGTGAATTTAGGCGACGAAGTCCTTGTCAAAGTAACTGAAATTGAC
 25 AAACAAGGCGGTGCAACGTGTCAAGAAAAAGCGTTATTAACGAAGAAAAACAAGAAAA
 TAATTTCTTTTAAACCAACGAAAAACAAGGAAGCTTCCTTTCTTTTCGTTGGTTTTTTC
 GTTGAAAAACAAGCCCTAAAAAGAAATGATAAAAAAGCTAAAGACGATCGCCAACCTCTT
 TTGTTTATAGTCAATTAGTGGTAAATTAATACTATCAGTCTGAAGAATATCTGGGGGTGT
 30 CTTTGTGAAAAAATTAATCCAAATAAAAAATAATCATTACCTTAATTTTAGTCATTAT
 TTTAGT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 475>:

GNMFI79F gnm_475

CCTTGTTAAAGTTAAGAATACAGCGTTGACATCATCCATTACCCCATAAAGTAAAGCGAA
 35 TAATGAGATAAACCACAGATTGTGTAAACACAACGTACGACAAACGCCATATTTATTTTC
 GCGATTGGAAACCAAAATTTGGTGGCAATAAGCCATCAGAGCAACTTGAATAATTGTTTT
 TGATGGTCCAGTAACCCAAGCAGATAATTGTAATAACACACCTTAAGAAGACCATGAACCT
 AAGATGATTACCAATAATTTGTTGGTAAACCTTAAACGTCACAATAAAGCAAAATTTGGTTG
 TGTAAATGTAGACAAATCCATTTGCCATTTGGAACAATATTAGCTACATACATTGCGATT
 40 AATCACGTTTAATAAAACCTCACCCAATTAATGACATGAAACACGCTTTTGTAT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 476>:

GNMFI80F gnm_476

CCTGAAAAATTGTTGGTGCATGACTTTTTAAACAATCGTACTGCCTAATTTTGCTTGT
 GCGCTGGTTATTGCCAGTGTTTGTTGCTCGATAGGTAAGTGACTCAACGTTGCCATT
 CCATTTGATGAGGTGTAAACAACCTTTTCAGGATAGGTAAGGGAAAAATTTGCTTTGGC
 5 TAACACAGGGTAATTGCTGAGCCATCGATAATTAACCATTTGTTGTTTTGATGTTGGGCGA
 TGACCATCTTTAATATTGTTGTGCAGTAGCATCTAAGCCTAAACCTGGACCAATTA
 TAACATCCGCTTGCTCTACGACGTTCGTGAGAAGGACTGTTCTTCAAGCCACGACCA
 TCGCTTCTGGGCATCTTGCATGTAAAGGCCCGTTATTTTAACATCAGTAATCACAGTGG
 10 TGAGACCAGCGCCACTATTGATACACGCTTCGGTACTCATGATGATGGCTCCGCATATTG
 TCGGTTTCTCCGA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 477>:

GNMFI81F gnm_477

CCAAAATTTTGGTAAACTAAAGATGGAAGTATTGGGGTAAAAGTGGTTGGCGAATTTA
 15 TTCAAGCGGGCCGGGAATTTATTTAAATCAATTAAATTACAGCTGTTTATAGGATTCGGCA
 AAGGCGCCAAAGTGTAGTTTGTATCCCATGTACCAGAAAAATTTGCTGGTTTAAACAT
 AACTTACCAATTGTTTGATAAACCTGTACATATAAATTTTATCCAAATCAGTCAGCGAA
 AATAGTTATCGATGCTCAAGAGGTTCCGTTTAAGTTTGAAGAAAACCTTATCGAGAAG
 20 GGAATGGTAGTTCMAAAGACGAGGTGCTTTCATTATTAATTGAAGCAAGTGTTATTGA
 TATTACCATTAGATAGGAGAGTAGTCCATGTTAGGAATT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 478>:

GNMFI82F gnm_478

CCGGTTCTGTTTTATTTCGATTGCTCATATTAGCAATTTCCGGCTCTTGCCCGCAAGAATC
 25 TGTCTTCCATTTCCGAAAGCTCTGCTTTAAGATTTCAATCTCTGTGCTCAACTTCTA
 CTTCAGAAACGCCAGCAGCATCAACAGCTTCCATTTCTTCTGTAATCTCTTGCTCTCT
 CTCTTTTTTACTCACTTCAGCAACTTCCCTTCTCTTTATGCATCTACTCTCTTACTCTAA
 CAAGGTTTGGCTAATTACCTAAAAACGGTAATAGTCACCTAGTTGTGAAGCTAGTCATAT
 30 CTCGAAACGTGTCTACCAAAACGGAATATTTTGAATACGGCATACTGGTGGTCCCTAGCA
 GGGCAATTTGTTCTTTGCCATGTCCTGATACTTCATACGTAGCAGTGATCATGCTCATAT
 CTCTTAAGAGATTGTTGCCAATTTCTGAGCCGATACGAAAAACAATTGGATTTTCTGTTG
 TTGCAGAACCAATT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 479>:

GNMFI83F gnm_479

CCTGCCCATTCGTTTACGACCCACCGGCAATAATTAAAGCTGTAATCATTTGATACA
 AAATCCCTTCTCTAAGTAGTCAACCACTAGTTTATTTCATTTTGTTTAACTTATATAT
 TCATCAACACAGCCAAACGCTCAATCAATCTTTACATTTTCTCATACTACTCAGTAAGT
 40 TTCAATAATTTATCGTAGACCTTAATCGAACTGTAATGAGAGTGTAATAATATTTTGTTG
 AAATGAAAAATCCATACAAAAAAGGAAGTCGTTCTGTAGAATAAGTTAAGCAACACC
 AATTACAGAGAAAAGAGGACTTCCCTATGAATGATTTTACTACAGAAATTTGCAAACTCT
 AGTCACTAAGGCGGATTTAAATGAATTATTCGTTTCGCACTTAGAAAAAGCGATAAACAC
 ACTCCTACGGACTGAATTAAACGGCTTTTATGATTACGAAAAATATGATCGCACTGGTTCC
 TAATTCAGGTAATTCGAGAAACGGTTCTTACTATCGATCAATCAAAA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 480>:

GNMFI87F gnm_480

5 CCGGAAAAAAATTCATTCTACAAATAAAAAACGTTAGAAAAAGCCATTAGTTATGCAAT
AGACAGAGAAGTAATTATGCTAAAAACATTTTAGATAATGGTTCTATTTCTGCTGTTGGTGT
TGTTGCTAAAGACGTTGCTTTTGTATCCTAGTACAAAAAAGATTTTGCTAACAAAAATGTT
GGTGCAATTTTGATACAGAAAAAGCGCAATCCTATTGGAATAAAGCGAAAAAAGAAATATA
TATTAAGAACAAGTAACCTTTAAACATTTTAACCAATGAAGAAGAAACAACCAAAAAAGC
10 AGCTGAATACATTCAAGGACAATTAGTAGAAAAATCTAAAGGTTTAAAAATACGATAC
ACCAAGTTCCCTGCAAAATGTACAAATAGAGCGAGTTATGAAACATGATTTTACTATTAGTCT
AAGTGGCTGGCAGGCAGATTATCCTGACCTATGAGTTTTTAGGTAACTTTGAAAGTTA
CAGTGTGTTGAATTTGGAGGATATAGNCATACTAAATA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 481>:

GNMFI88F gnm_481

5 CCGGTGAAATTTACCCGAAATAAACATATTCTGCTTGATACATGATATTGCCTAATTGAA
AAGCGTCATTTACTTTTGCTCTGTTTTGTACATAAGTGTGTATGGAATTGCTGTATTCC
AATAAAACCTTAGCTAGCCTGCTGTGATCTTGTTTTCGAATAATTTAGCAAAATGGCTAGCAA
20 TTCCGTATTAAACACAAATAATTTATCTTTATTTAAACGGTCTATCTCTATTTCTMAAA
TATATGGATCGTCATTCTATTAGCTGCAGCAATTCATAGCCCAAGCAACATCTCTCTCAA
ACATAAAAGTAGCACATCTAAGATCGTAGCCTTCCACCCGTAAGTATTTAGATAGAAAT
AGGTTTGTGATTAAAGAGCGTATGGTCTGTACCTGTCTCTCTCTTAAAGATCCTTTG
CTTTTCTTACTCCTACTAAACCGTGTTTCTAATGCTATTGATATTGGACTTATCTGTTA
AATGAATTAATTATT

25

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 482>:

GNMFI89F gnm_482

30 CCAGCGCTGCTTCTCGGGATCAGGCGTCGTTAAACCAACTCTAAATGTGCGCGGTTAG
TTCTCTAAAAAGCTTTGTTAAAGCGAAATGTTGTAGCTGTTCCATCTAGTGGCACC
TGATTGCTTTTAGTGGAGAGCTTCAAAGTACCACCAAGCATAATAGTGGGAATTTCCATAT
CGCTAAGTTTGTGACGCGTGATGCACGGAATTCGTCACTACATGGATTTGTTTCCCACTA
AAAAAGGGATCATTCTAACGTGGTTGAACGAGCATCTAAATAGATCATATCGCCATCTT
GTACACAACCTAACGGCTAAAGAGCAATCTTTTGCTTTTCGTGCGTGTTTTGATTGATT
TTTCCGTCATGTTTGTTCAAAGCCTAAATTAAGAAATACGCTTAGCGCCGCGTGAATGC
35 GTTCTAACAAATTTGGCGTCTTCAATTTCTGTAATCGCGCGGATTTGGGATTCGAAG
CATTTGAACAAGCTAGCAAGTTCTTGGCATTTGACGACTGATT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 483>:

GNMFI90F gnm_483

40 CCCGCAGTTCTAAAATTTCAAGCAATTTCTCATTTGGTTAAAAAGCGGTGCTTCTTTCAAGT
TCGTGCTTATCAATCAGCTGGAAATTTCTCTCCGACGTGGCCGTAGTTGGGCACGAAC
TTTGAAACTTCAACACGTCGTCGTGTAATCGTCCATCTCCTGTACCTTCCCAAGCCTGC
ACTGCTCGAGGCCACGTAATATCAGCCCAAGTATAATTAATCTCTTTTCAATTTCA

AAGGTCGAAATATTGTCTAAACGAGGTTGAATAATCGTCATTTCGCACGGTTTCAAATTCG
 TAAATAATGTCGTACTTATCCACCGCACCAGCGATATAACATCAGTTGAGGGTTTAAAT
 TAGCGCATCAACAGGAACACCTTTGGCGTATTTCAGTCGATAATTTCAATCGTCTTATCT
 GATAAGACAACCCAGTCCGAAGTCCAAATCCTTCTGGGACCCATTTTGAATAATCTACT
 5 TTTTGT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 484>:

GNMFI91F gnm_484

CCCAAAGTGAATTAACGTTTAATTCAGCGTGGGCGTTTAATCCTTCGACCAATGGTTATG
 10 CGTTAGGTTTAGCAATGATGGACGGTGAGCGCGTGTAACTTGTAAATTTGCCAAAG
 AACAAAAGAAAGATTGGCAGGCTGTCCAGTACAACFCGAGTATATGTGGAATCATGACG
 GCTCAGACAGTGCCCTTGTCTGAAACGTATGTCGAAAAGCTCTGATGTGAATCAATTAGCTG
 TAGATATTTTGGTACATTGGGAACGTGACGGCACAATAAATGATCCCAACGAACAAATCA
 AACGAAAAACAAGTGCGAATAATTGGTATAAGAGACTGTCTACAGGTTCTATGGGGGACG
 15 GTTCAGCCCAATATTGGTGGTGGCAAAATTTGATGTGTTAGAACAATAATGTTAGGGCAACAG
 TCAATGGAGGTCAGTGTATTGGGGGACTTCTTATTATGTTGAAAAGATGGGCTTCAAT
 CTTTAATGAATACAGGCATATGTTTGGCAGTGA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 485>:

20 GNMFI92F gnm_485

CCTGCCCGAGAAATGTGGCGGAGGTATTAATAATTGCGCCTTAGTTTGTCTAATTCGAAGCAC
 GAAAAAATATCTGATGATGGATAATGCACGTTGTTCAGATAATCGCATTCATGGCATTT
 ACAATTTACGGTGCCCAACCGCACAGGACGGTGGGCAGGGCGATTATTACAAGTACAGAA
 25 CTGGCTAGAAACTATTAAAGTGAATTTGATTTGCCCGTCAGCTTGTGAAAGCAAAAGA
 TGTGTAAGGCATCGAATTAATGATGTAAGATGTGCCAGACACATTGAACAACCTTATCCG
 AACAGGTTTAGTTGCCAAAGAAGGGCATCGGTTTCATCGTGTCTGACTTTTCAGCCATTGA
 GGCCCGAGTGATTGCTTGGTATGCCAAACAAGATTGGGTATTAGAAGTATTCCGACACACA
 CGGCAAAATTTACGAAGCAACAGCGGCGCAGATGTTCCATTTAGGCGAAGTGACGGGACTA
 CGACTGGAAAAGCACGAAGGTAAT

30

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 486>:

GNMFI94F gnm_486

AAGAAAATTTATTTATCGCTAGTACGATCAAGAAGCGGGATCGAAAAGTAGTCTTAGCCG
 AAGCTTTCCAGGTGTTCCAAATAGAACCTGCCTTACTTGGTCGTTCTTTACTTCTTTTA
 35 CGACTTTTGAAAAAATTAACATGGCGCTAATACAACCTTTGCTTTCAAAAACAAGATTCCG
 TGTGATTGATGACATCTTTCTTCATTAAACGATTGGACAACGTCAAGAAATTTTACCTC
 AATTACCCTAGCAGTTCACCAAGAAACAAGCGCTTGCTATTCTGACAAAAGATCCAC
 AATTTCTTGATAGTCCCTATGTGCACCCCTGTCTCTACATGCGTTATTAACTCAAGAA
 AACGCTTGGCACTGATTGCTACCAGACGTTTCTTTACGTTCTCAGTAATTTCAACATCA
 40 GGAAGTGAATAATAAACGTGGCGACTTTACCAAGTTCACTCTCAACATTAAT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 487>:

GNMFI96F gnm_487

CCGCTCATTATAAGAACAGGTTCCGGTAGTAGTATAGAAGATGCTCCAATGTCGCTTG
 AAATTCCTGGTAAGATATCTGCCAGTGAATAGGATAAAGTATCTTTTGTGTCGGTGAAATAC
 CTTATTTTCGCTATCTAAATGATACATGGCGTGAATAAGTTTCATGAGATATCGTGAAATT
 TTTCTCTTTTCGCCCATGTTAGAATTATAAGCTAGCGTAGTCTCGTATATCATCTTTAAT
 AATCATACCTGATATAGATCTACGTGCTGTTTTTTCAAATGGAAAGGGCCTTATTTTAAT
 TGATTTAGATGTTAATATTTTCATCCCAATATATCTATGCTCATAATTATTAACACTCAT
 TCCCAACATAACATGTGTGCTGAAATAAATTCGTTAATGGTACGCGAAAAGTTAAGGTA
 CTCGTCTACTTCTACTGTCACTCTGAAAACACCTTGTAATTATTCACTTAAATTTTCT

10

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 488>:

GNMFJ77F gnm_488

CCGGCTTCTTCAGGCCAAATCAGCCTTCTGCGCAGGGGAAGACGTTTGGAGTTGGTTTC
 CAGCTGCGGAGACCACCAGCCAAAGCAGCATGCGGACTTTCGCGGTATGAACAACCGGAA
 ATGGTCAAGAAACGGCCTGTCGTGTCATAGCGGAAACAGGCACAAACGGCAACTGGTA
 ACGGTGATACCCCTTAAGCAGCAGAAACCTGTCCCTTTGGCGGACTACCAACCAAAAATG
 AGTGGAAACCCCTTACCGGACAAAGCCGACATCCAATGTTGGGCAAAATGCGACATGACG
 GCAACAGTCGGATTGGCAGCATTTAGACCGGATACAAACCCAAAGGGTGGCAGCCGCTGCATT
 CCAATAATCAGTGAAGAGGATTTTCAGGCGATTAAACAGCCGTTGCCAAGGCATTCAAA
 CTGTACTAGAATAAAACCGTTCCCTTAAAGGGCTGCAAGACTATTCTGAAATATGGGC
 AGCCGCGCACGGGCGACAGGCGATGACAAGCCGTCGCTGCGTTTTATGGGGCGCGAAT

15

20

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 489>:

GNMFJ87R gnm_489

TATTGGCTTCATTTAATGCTCCTGAAATCCAAGCGGTGCTGCTCAAATGAAGATTGGA
 CCAATAAATTCCAAATCAGCAGCACCCGACTGTGATTGTCGGCGGCAAAATACCAAGTTG
 AATTTAAAGACTGGCAGTCCGGTATGACCACGATTGACCAAGTTGGTGGAATAAGTACGGG
 AAGAGCAGAAAAAGCCGCAATAAGTTGAGGATTGAATGAGTAAAGGCCATCTGAAAAATAG
 GATTTTCAGACGGCCTTTTGATTTTAGGCTTTATAGAAGAGATGATTGCTTAAAGCCTTAT
 GGTTTTAAATCAGAATATATAGCGGATTAACAAAA

30

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 490>:

GNMFK22R gnm_490

CCGAAGATGATGCTGGCTTGTCTTCTCTATGGCCGGTGGTGTTTTACAGAGGACGG
 CTTTGGGTAAATCGCCTTGACGAGCAAGAGCGGCAAGTCTCCGGGCGAGCGCAGGG
 CGACATCTGCATTTATTTGCGCGAGGAAAAACAGACGCGTGCAGTGGCTTCGGTGT
 GCGAAATAAGCTTGGGCAGCCATTCCATGACGGCGGGCGGTGGGCTTCGGCGCTTTAG
 GGTGGCGCTATATAGGGGGGATGTAGAGTTCGCCCTGTTTTTCAAAGTCAAAGGGGCTTT
 TAAAGGCGAAGGTAGTGGTTTCAGGCAGCATTACAACCCGGTTAGCGCACATACAAAT
 TGAAGTTACCCAAAGATTACAGGG

40

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 491>:

GNMFL05TR gnm_491

TACTAACTCTGCTGCTCGTTCTTGCGAGTTACACCTGCGACAAACAGTTCAATGAGTTTATT
 TGTTTATACCGGCTTAGACGACTTTTTCATAGGGGCAACTCTAACTTAATTGGATT
 CCCTACTTATCTATGAGAGCCCTTGTTTTAATTGACTATAATCCGCTATATTGTGAGA
 AGCTGGATGAC

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 492>:

GNMFL42TR gnm_492

CAGCTCGGTAATAATTACGAATTCGAGCTCGGTACCAGATTCCTGTGCGGATGGAGGA
 GTTTGACCGCCTGATTCTGCTGATACGCAAACTGTATCAAATATTGGACGGGCAACATAT
 CCTCTCCAGAGTAACGGTTTGCTTCACCACCAAACCGCGCGACCTGATTGCGCTTGA
 TAAAGCGGCTGCCGTTGCGATTGCGCAATGTTGCGCGCCCAACGTTGGCTCATCTACAC
 GCAAAATTCGGGAACGCTTCGCGGGTTCGGGCGCGGGTTTCACGGTTACGGTAGAAACGCT
 GTCGCGCCGCTGTCCGAGCTTGAAGACGCTATCTCGAGCTTGTCGCGCGCGCCGCT
 CTCCTTTTCGGTTTCACGCAAGATGGGAAATCCGGCAAGCGGGCA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 493>:

gnm_493

CCTTTCATTGCTGCTGGCGTTTCTATGGGTTTCGGTATTCATGGGCGCACTGACCTACA
 TCGGCACGCAACGAACTTCATGTCGAAGCCATTGCGGAACAGCGCGCGTACCGATGC
 CGACTTCTTCGGCTATATGATGTGGTTCGGTCGCCTTCCTGACACCCGCTTCATCGTAC
 ATACCCCTTATCTTTTCGTTTTCAACTGCTGTAACGCTATGCCGCTCTGAACATTGAGA
 CGGCATTTTAAATTCCGGCATAATCAAATCAATATCCCCCTTCOGACAATTTATAGTGG
 ATTAACAAAATCAGGACAAGGCGACCAAGCCGACAGTACAAATAGTACGGAACCGGA
 TCTCACTTGGTGCTTCAGCACCTTAGAGAATCGTTCTCTTTGAGCTAAGGCGAGGCAACGC
 CGTACTGCTTTTGTTAATCCACTATAAAATCTAAGAAACCTTTTTTCCCGATAAGTTT
 CCGTGCCGACAGTCTAGATTCCCGCTCGCGGGGAATGACGAAATTTCAAAGTTATGGC
 GTTATCGGAAAAACAAAAATCJAAGCCGAGAAATTTATCCAAACAAACCGGATTTCAA
 AAACAGATGCCCGGCGGAATGACGGATCTTAGGCTTCTGTTTTGTTCTATAGTGA
 TTAACAAATCAGGACAAGGCGACGAAGCCGACAGTACAAATAGTACGGAACCGAT
 TCACTTGTGCTTCAGCACCTTAGAGAATCGTTCTCTTTGAGCTAATGCGAGGCAACGCC
 GTACTGGTTTTGTTAATCCACTATATTTTTTCAGGAATGACGGTTTGGAATTCGCCGA
 AACCCCAAAACAGAAACAGACAAACAGGTTTTCCGCCAAAGCGGCATTTTCCGACTT
 TGC

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 494>:

GNMFP26TF gnm_494

CCGGTGGATGGTATGCGCAGCATGTTTCTGAAATAATCGCTTACCGTGCTTGTTGTG
 TTGACCCGGTGTCTGCGGATAATCGTGGTAAATGCTTCGCGCGCATAAGCTAAATCCG
 CCTGCACATAATACGGGCTCGCGCTGCCGCTCTCACTTGCCGCTGCGCTGCGGAAGATA
 AGACAACAGACGAGATAGAAGAGAAGAGAAGAGAAGACAAGAGAAGAGAAGACA
 ACAGAAATAGAACAGAGGTTTTTGGGGCTGGATTCAATTTCCGACTCCGCTATTCGGTT
 TAACTGATTAAGAAACACTTTTCAATGATCTTGACGAGGCGGACTATACCGAGTTTGT
 GCGGATGTTTCAACCAATATA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 495>:

gnm_495

```

5  CAGGAAGGACGCGGCATCGGGCTGATTAACAAAATCCGCGGTATCATCTGCAAGACCAA
   CGTATGGATACGGTTGAAGCCAATTTGGCACTCGGGCTGCCGTCGATGCCCGCGATTTC
   GGTTTGGCGGGGTTGGTGAATCTGATTGCGTGCAGAACACCCGTTTCCGATTCCGTGGC
   GAGCAATGCGCGCACTTTATGTACCGTTCTGCGTGTGAAACATATAGGCAGATAAAAA
   AGCCGCCCGTTGAAAAGCAGACGACTTATGTTTTGTGGCACTAATTTGTCCCGATAAGCA
10  TTAACATATATAATTTATTTATCATTATTGGTGGGACGGAGAGACTCGAACTCTCACACC
   TCTCGGCGCCAGAACCTAAATCTGGTGGCTACCAATTTCCGCACGTCCGCATGGGAAT
   TGGACGATTATACAGATTTGTTTTTTGTGCAAGGTTTTCGGCGGGGCTGTTGATGGCT
   TGGGGTTTTGGGCGCGTAAATCTGTTTTTCGTCCGCTGACATCGGAATCGGGCGGTTTT
   TTGTTTTTATTGACGGAAATTTGGGATAGCCTCGTGGCTTTGATTAAGGATTTTCTGCTGAC
   TCAGGGTTTGAAGCTGCCGCTTGACGAGGTTTCGGGCGGCGTATCTGACGGCGCAGACGGT
15  AATGGATATGGGACGGCTTCGATAGACCGTTCGGTTTTGTGGCGCAGTGATGAGGGTTG
   GAAACTTGCCGATTACCTGTCGTGCCACAATGTCGCCGAAGATGCATGAAACGGCTTTT
   CATGGCTTTGGATTCCGTGTTTTCCGCGCTCGACAGGCGTGGGAGTCCGGCGGCTATGCG
   CTTGATGCCATCTGAAAACAGGCTTTCCAACATGATGCCTGTCCGCACAGGGCGAGGT
   TTTGAAAACCTGTGGGATTGGATGAAGCGGCAGGCAAGTTTCGCTGGCTTCCGCTTC
20  GCGCAAGCGGTTGGATGAATGTGCTCGGATGTACCGGTTGGCTGGATTGGGGGA
   GCTTTCGGGAGAAC

```

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 496>:

GNMFP92TR gnm_496

```

25  ATCAACAGCGCGCCGTATTTTCGGTCAATCCGCGCAAGGCTTTGACAAAGGCTTCGGTC
   GGGCGGACGAGGTTTCATATTGCCGACGAAGGGTTCGACAATCAGCGAGGCGATTTCATTG
   CCGTTTTGAGCAAAGGCTTCTCGAGTTGGGCGATATTGTTGTACTCGATTACCAAAGTG
   TGTTTGGTAAAGTCGGCAGGCACCCGGTGGAGACGGGTTGCCAAACGTGACGAGACCG
   CTTGCCGGCTTTCACCAAGTATGCTGTCGGAAAT

```

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 497>:

gnm_497

```

35  CCAACATACAGGCGCGTGTAGAAACATGGCGGCAAAATCGGATATTTCACTCTCCACTATA
   AAGAGCGAGGGGGCGAGCTGTCAATACTCAAGCGCTGAAAACAACCGTAAACAGCGCTGT
   TTCCGTGATAGTCTATCATGCCGAAAATCAATCCGTGTCACTACTTTAGGGGGATTGTTT
   TCCATATCGCAGCATTGCCTTGCACAAAACAACAACACACGCAAGCCCCCATACC
   GTACCGCGCAAGAAAATGATAAATTATAACAATGTTACGCCACCCGACACAGACCCAC
   ACCGACCCGCCATGAAATTACAACAATTGAAATACGCCTTAGAAGTTTACCAGCACAACC
40  TGAACGTTTTCCGAAGCGCGGAAAGCCTGTTTACTTCGCAACCCGGCATCTCCAAACAAA
   TCAAAATGCTGGAAGAAGAAATCGGCATTGAGATTTTATCCGCAGCGGCAAGCGGTGG
   TTTCCGCTCTCGCAGCGGGCAAGGTGTTTTGGATATTGCGGGACGTATTTGCGCGATG
   TTCAAAACAT

```

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 498>:

gnm_498

CTTGCCGATTAACTGGGTATAACGTTTCGTGTTTCAGGATTGACGGCAACGGCAACGTCGCC
 CAGCAGCGTTTCAGGACGGGTGGTCGCCACGATAACGGCTTCGGCGGATTGTCCGCCAG
 CGGATAGCGGATGTGCCACATAGAGCTGTGTTCTCCCAcgtcGACGACCTTTCCGCTT
 5 TCAACCAATCCCTCGCGCTTGATTATTGGTAATAATTCCTATTAACTTTGTTAGACA
 ACTCGTTCCCTATCCAAATCATGAACACCGCGCCATCTACCGCCAGTACCAAACTATGTC
 CGCTCCGATAAATCCGGCTGGCGGTGGACGGCTGTTCCGACAGCGCGCTCATTTGCGCAG
 GCAAAACAGCCCGGTTTGCATCTGGAAATGTGCATCAACCGCTTCGATTCCGGGCATCACC
 10 TTGTCGGCGATGCGCGGCGGGCAACGGCGCGCTTCCCACCGAAATCCACAATTTCCAGC
 CACAACCTCGCGCTTGTTCGTATGGTGTCCGGGCAAGAACCGGTTACAAATGGCGCGCAGG
 GAATACCGCCATCTGCCGCGGAATCTGACTGCTAGCGCGGATTTCGGCGACGTATCC
 GAAACCTGCTGCGCGACAACAGCGCATGTGCGCGCTGCATTTGGATTTTTCGCTGGA
 AA

15 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 499>:

GNMFU01F gnm_499

CCGCCATTAACTCGGGTAAGTTAACAAACAGTTGGGATAGCAATGGTGTATTACTAT
 TTCTTTTTCGCGCTAATTTCTTTGTTTAAATTTGGGTCATCTTTGTAATTCACCTAGAT
 TACTTTGTGTCAGCATTAGATAACCTAACATGGTATGTTCCATCAGATCACTTTGTAAAA
 20 ATAACTTCACTTTCCATAATCAAGTCCTAGTGCTAATAAAGTTTAAACAGTTGCAAGT
 TGTATCTTTGAGCATTGTTGGTTCAAAATCAACAGTAATAGCATGAAGATCAGCAACAA
 ATAAAAACAGTTGGTATTGACTTTGGAGTTGTTTAAACCTTGCATTACG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 500>:

GNMFU02F gnm_500

CCGCGTTAAACTTCTCTTTAAAGTTTCAATTTGTTGTGAACCCCTTAAAGCTTAAATT
 CACTTGCAGGTTAACTTTTAAAGATCAACTAAATTAATTTGGTTTAAATTCAGGTTT
 TATTGAAACTTTAAAGTTTCTTTATGAGTTACTACTATTGTTTATCTTTGGTTAATT
 30 GAATATCAATTCAATACCATAAAATCAAAAACCTTGGGCTGCTGAAATGCTAATTTGG
 TGTCTTCTGTCGAATAGAACTATAACCGG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 501>:

GNMFU04F gnm_501

CAGTGAGTTTTTTGACAAGAACTCATGGGCTTTTGTGGATCAGAGCCAACTCTGAACA
 35 AGCTGCTATTAGCTTTTGAAATTTATATCAGGATTTAATTAAACAACTTTGTATCCC
 TGCTTTTGTGGTTTGAAAGTGAAGTGAAGCTTGCAGGTGCTAAAAACATGGAC
 AATAGAAGCAATTATGCTGATGACAAAGTTTCAATGTGCCGGTACCGAGCTCGAAT
 TCGTAATCATGGTCATAGCTGTTTCCTGTGTGAAATTTGATCCGCTCACAAATCCACAC
 40 AACATACGAGCCGGAAGCATAAAGTGTAAAGCTGGGGTGCTAATGAGTGAGCTAACTC
 ACATTAATTTGCGTTGCGCTCACTGCCCGCTTTCCAGTCGGGAAACCTGTCTGCGCAGCTG
 CATTAATGAATCGGCCAACGCGCGGGAGAGCGGTTTTCGATTTGGGCGCTCTTCGCT
 TCCTCGCTCACTGACTCGCTCGCTCGGTCGTTTCGCTGCGGCGAGCGGTTATCAGCTCAC
 TCAAGGCGGTAACACGGTTATCCACAGAACTACGGGGATAACGACAGAAAGAACATGTGA
 45 GCAGAGGCGAGCGAAGGCCAGGAACCGTAAAAAGGCCGCTGCTGGCGCTTTTCCAT
 AGGCTCCGCCCCGTGACGAGCATCACAAAAA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 502>:

GNMFU07F gnm_502

GGTATTTGGTCCATTAAAGGTGAGAAGTATTACGTATTATTAACAAAAAGGGTGATGTT
 5 AAATCAAATTCATCTTTTGTGTTGATCTTGGAATATTTTTCAATATAACCATCA
 CCATTATAAATGTTTGACAGATTTTAAATGAGTTTTCACGCCACCTCCGTTAATG
 TTAATGTAAGTGCAGAACTTACGTGGTTTTAGTTTTAACTGCTGGATATTCAATATAAC
 GGGATAATTTTTAACTGCTTTTATTTTGTAATTTCTTACAA

10 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 503>:

GNMFU08F gnm_503

CCAGAACTTAGTTTTTGGAAACAGATCATATAACGATGGTCATTAGGTGGTTGTTATTG
 CAACGSAACAGATAGTTCCTCCAAATTAATTTCTAAACGGTCTACTAATCAAGGTACAA
 GTTCTCTTAGTTGAGGAGGTACCTTGGGTACCACCATCAGACAGGTGCAAAACCGTTAAT
 15 CTACTTATCCAAACGAGTTAAATTTTTAATTTGGAATGATATTGCTCCTGGTTCAGTAA
 AGTGAAAACCATATGCACGTTTTCTGTTGAGGATAGAAAAACGAACTTCAAGTCAGG
 GTACCGAGCTCGAATTCGTAATCATGGTCATAGCTGTTTCTGCGTGAAATTTGTTATCCG
 CTCACAATTCACACAACTACGAGCCGGAAGCATAAAGTGTAAGCCTGGGGTGCTCAA
 TGAGTGAGCTAACTCACATTAATTCGCTTGCGCTCACTGCCCGCTTCCAGTCGGGAAC
 20 CTGTCGTGCCAGCTGCATTAATGAATCGGCCAACGCGGGGAGAGCGGTTGCGTATT
 GGGCGCTCTTCGCTTCTCTCGCTCACTGACTCGCTGCGCTCGTTCTGCTCGGCTCGGCGCA
 GCGGTATCAGCTCACTCAA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 504>:

GNMFU09F gnm_504

TTAAATCGSAAATCATCTAAAGTAGACAAAAAGCGATAGTCATCAAACCTTATTAATC
 GCTAAATTAAGTAAATCAGTTAGTGAATTTTCAGTTTTCTAAAGCTTGATTTGTTTGA
 CTCATCAAGTAAACAGTTTTTCATTAATTGATTTGATTCGAGCTAAACCTTTGATGGTTT
 30 AAGTTATTAAATTTTTAGTAATTAGATCGCAGTCTCATTAAAGCTCAATAATTAATCA
 TGCACATCTGTTTCATTTTGGAACTAATTCATAGGCTTAAATGTTGTTTTTAAAGC
 TCATTTTTCTTTTCATATTGTTGAATTTGATTACGAAATCATCAATATTTT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 505>:

GNMFU11F gnm_505

CCAAATTTAATGTACTAATTCGTGTTAGATAGATAAGAATTTGGCTACTAACTCCACCTCCT
 ACTAACACATTTTAGGGGCAAATTTTTAATTGCATTTTAAACATGATCAATGTAATGA
 TCAATAATAGTAGCTTCAAAATGGATGCTAATTCACCTCAATCAATTCGGGTTTTATTA
 GCACATTATGTTTAATCTTGTTTAAACACTGAGATTTTAAACGAGAATAGGAAACTTA
 GTTCACTTTAGTAGAAGGTTTAAAGAAATAGTGAGGTTTAACTAATTCCTTTATTAAGAA
 40 CTATCAATTTTACTACCAGCAGGATAATCAAAGCCATTGCTCGCCTACTTCTGCATAA
 ACTTCA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 506>:

GNMFU12F gnm_506

```

AGATAAGAAATACAAAATTCTCATTGAACAAGAGTTAAGTAATCCCAATTTCTTAGTTA
5 TGAATAATGACGAATTAAAGCACAATGTCAAACCAAGAATTAACCTGAATGATTAGTTC
AAAAAGTAAATCTTTTCATTTTGGATGAATAATGCTGGTTTAAAAACTTTAACTTCAT
TGCACCTTTATCCTATTGATAAAAATGAATCTAAATTAAGTAAGCTGTAACCTGTTTC
TCAATATGATAAGCAGTTTGACACAAAGGTATTTGCAACAGAATTTATCCCTATCCACAA
10 GATTAAACCAACAGATCGATGATGTCAGATTATTGGGCAAATCTTTGAATTA AAAACCCA
TGAAGTTTAACTGGTAA

```

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 507>:

GNMFU14F gnm_507

```

CCCAGGATTGGCAATTTTATGCCTGGTTGCATCTTACTTTCCTCGGSTCTTTTAGAAG
15 TTATATCCCAACTCTAGTTTAAAGAAATACTGTTGGTAATCACAACAGTTATGTTAATAA
TACTGTCCCTAAAAACAATTTTATGAAAAGTTTATGATCTAACTTTTGCCTTAAATTT
CACTAATCAGAAAACCTCAAGAGTTTGGTACTGTTGGTTAATTGACTGAAAAGGAGATGA
AACTAAAGATCTTAAATACATTAACCTATGGGTACCGAGCTCGAATTCGTAATCATGGTCAT
20 AGCTGTTTCCTGCGTGAAATTGTTATCCGGTCACAATTCACACACAATACGAGCCGGAA
GCATAAGTGTAAGGCTGGGGTGCCTAATGAGTGAGCTAAGCTACACATTAATTGCGTTGC
GCTCACTGCCCGCTTCCAGTCCGGAAACCTGTCGTGCCAGCTGCATTAATGAATCGGCC
AACGCCGGGGAGAGCGGTTTCGTAATTGGGCGCTCTCCGCTTCTCGCTCACTGACT
CGCTGCGCTCGGTGCTTCGGCTGCGGCAACGGTATCAGCTCACTCAAAGCGGTAATAC
25 GGTATCCACAGAATCAGGGGATAACGCAGGAAA

```

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 508>:

GNMFU15F gnm_508

```

ATCCTTTATAGCTAATTCGACGAGATCCAGCTATCACGGTCCACTAATTGAATTTACCC
CTAATCACAAGTCATCCGCTATCGTTTCAACGAGAGTCGGTTTCGGTCCCTCCAGTTAATG
30 TACTCAACCTTCAACCTGCTCATGACTAGCTCAACCCGTTTCGGGTCTATGATACAAC
AAACGCTCTCTTAAAACTCGCTTTCGCTACAGCTCCCATCTCCTGGTTAACTAAGCCTT
GCTATCATAACTCGCGGCTCATACTTCAAAACGCACGCCATCACACATTAATGTGCTCT
GACACGTTGTAGGCATATGTTTCAGAAATCTATTTC

```

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 509>:

GNMFU16F gnm_509

```

CCGTGAGTTGTCACGTTGTTTTAAAGTGATTCTAGCTTTACTGAAAGCAGTTTGCT
CAAGGTTTAACTGGTGTTGTTACAGTTCCAGTCTTAGCTGAGCTTGACTGTGCTTGCT
40 TTTGGTTTTGCAGCGCTTGAACCTGTTATCAAGTCTTAGTTTGACCTGATTATTTT
CAGCTAAGTTGCAAGTTACGTTGCTTAGCTTCAATTTGCTAAATCTTTGGTCCCTTT
GGAGTTCAAAAACCTGATAGCTTTTGTAGATCACTAAAGCAATCTTTAGTTCGTGTT
CCTTTTGGGTTT

```

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 510>:

GNMFU19F gnm_510

5 TTTGCAAAACAACCTGAATCAACAACCTGATAGTACAGCTTTGACAGTGATTACCTCAA
CCAAACCTTGACCAACCTTCTTTAGATGATCATGTTCAGTACAACCTTTGATCACCATTGAA
GAGCTCAAAACAGTTGCTGAAGAACAAAATAATTCAAGTTGGATTTGATCAAGTTCAA
GCTAATCTTGATAATAATGAGGAATACACCAACTGCTGAAAAAAGTAAGTACTGAT
TTTGAAGTAAACAAG

10 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 511>:

GNMFU23F gnm_511

CCTGACAACTAAATCAAGTGAPAGATATTTTCGCTTAGCTTCAGGGCAAATTTTTTA
AAGTTAATTTTGATAAATGTGTTTTGCAAGTACAAAAACATCATAATCTTGCTTTA
15 GTTCACAAAAAATTTTCGAATTATTCGTTGAAGATGAPAGATAAATTTAGTTTCAAAA
AAACTATGATTTCAACTTAGTTAGTGATGGCTTTATGAAATTTGAAATAATGCTGGTTT
TTTAAACCTAAAGATAAAAACAATTTCTTTACAGCAATTCCT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 512>:

GNMFU25F gnm_512

20 CAGGGTGGTTTTCTTTTCACCAAGTGAGACGGGCAACAGCTGATTGCCCTTCACCGCCTG
GCCCTGAGAGAGTTGCAGCAAGCGGTCCACGCTGGTTTGCCCAAGCAGGCGAAAAATCCTG
TTTGATGGTGGTTAACGGCGGGATATAACATGAGCTGTCTTCGGTATCGTCGTATCCAC
TACCAGATATCCGCACCAACGCGCACCCGGACTCGGTAATGGCGC

25 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 513>:

GNMFU27F gnm_513

ACCTGTTTCAAGTGAAAGTTGGTAGTTGTGTTCAACTGAACTAATTGCATTTCTTCTAAC
CTGAGCATCAACTTGTCTTTTCTTTGGCGGGTTTTGGCTTGCTACCGGTTTGTTCAAA
30 GGTGAGAGTAACAGAAGGTAATCCCCCATTAACCAATCAGGACTTGTCAATGTTGTCAAG
TTCCTAGCAGTTTTATCATTAGTGTTTTAGTAATGTTTACAGAAGAAAAGCCCTGAAT
GAATAAACTGTTAGCATAACTTTTTCAACA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 514>:

GNMFU30F gnm_514

35 CCAGCCACTAGGTAAGTTAACCAATAGTGGTACATACTGGGCACGGGGCAAACATCGTGT
TAGGATCAATAGTTCAAGTTACTGGTAAGTGAATAACCTATTAAGTCAATCTGGTTAC
CAGGTTTAAAGCTAATTTTTTCAGTATCACTATCACTAGTTGCTCCCTGGCCATTGATAA
GGTTAACAGGGGAGTAGATACTACGCCACTTAGTTTACCATCCATCTTGGTAAATGTAC
TATCACCTATCCCTATTTCACCTCTATTGTTTGTGTACTATCAAGAACTTTTTAAGGG
40 GTACCGAGCTCGAATTCGTAATCATGGTCATAGCTGTTTCCTGTGTGAATTTGTTATCCG

CTCACAATTCCACACACATACGAGCCGGAAGCATAAAGTGTAAGCCTGGGGTGCCTAA
 TGAGTGAAGCTAAGTACATTAATGCGTTGCGCTCACTGCCCGCTTCCAGTCGGGAAAC
 CTGTCGTGCCAGCTGCATTAAATGAATCGGCCAACGCGCGGGGAGAGCGGTTTTCGTATT
 5 GGGCGCTCTTCGCTTCTCGTCACTGACTCGCTGCGCTCGTTCGCTTCGGCTCGCGCGA
 GCGGTATCAGTCACTCAAAAGCGGTAATACGGTTATCCACAGAATCAGGGGATAACGCA
 GGAAGAACATGTGAGCAAAAGGCCAGCAAAAGGCCAGGAACCGTAAAAAGGCCGCGTTG
 C

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 515>:

10 **GNMFU31F gnm_515**

CCGACTCTGAAGGCTTGGGATTTTGTAGTGGAGTTGAAACTATGCGAGACACTTAGAGT
 TGAGGATGGCTAAGTCAACCCCTTACAGTATCTTTGATTATTTAAAGGGGATTGGTTAC
 TGGTTATTGATGAATCACACCAACTTTACCGCACTTAATGGGATCTATAACACTGATC
 15 TTTCAAGAAAGCAAGCTTAATGATTATGGTTTTTCGACTCCCATCTGCACCTTGATAACA
 GACCGCTCTCATTGTCTGAATTACAACAAAAATGCAAAAAGTTATTTATGTTTCAGCAA
 CTCCAAGAGATAAAGAGATTAGTTTAAGT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 516>:

GNMFU33F gnm_516

20 GCGAAGATGATCTTAAGGGCTTAGATTCCAATCAAACTCAAGCAGGAAATGTTCCAGAAG
 TTGAGACCGTTTTTTGTACGAAGATGATCTTAAAGGCTTAGATTCTATTATTAAGAGC
 ACCAACACATGATGAAATGCTAAACATGTTGAACATTTAAGTCAAGATTATTCTAAG
 AGATAAAGATAGTGCTAAAGCAGATTTATCTAATATTCTGATGATATTGATTCAGTTT
 GAAAAGAAATTCGGTCTTTTACTGATGAGACACAAAAA

25

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 517>:

GNMFU37F gnm_517

GACTCTAGAGGATCCCGTTATTAGTCACTATCCCTTATGAAAAGACTATTTGGAGGTT
 30 AAAATTCCTAAGTACCATGGAGTTGAAAACCCCTAACTTTAAGCTAATTGATGAAAAGATT
 GCTGAATTTAATAGAGTAAATGAAAACCTGATTGTAAGTCACTTCAAAAAGAAAAGGAA
 TTTGCCACAAAACCAAGTTACTGTTCAAGTTTGATACTCAGTCAAAAAGTCAGAGAAGTG
 AAAAAACCTAGTAAAAAATACTGAAAAGTTATCACTGGGTACCGAGCTCGAATTTCGTAA
 TCATGGTCTATAGCTGTTTCTGTGTGAATTTGTTATCCGCTCACAATTCACACACAACATA
 CGAGCCGGAAGCATAAAGTGTAAGCCTGGGGTGCCTAATGAGTGAGCTAACTCACATTA
 35 ATTGCGTTGCGCTCACTGCCCGCTTTCCAGTCGGGAAACCTGTCGTGCGGAGTGCATTAA
 TGAATCGGCCAACGCGCGGGGAGAGCGGTTTGCATTTGGGCGCTCTCCGCTTCTCG
 CTCCTGACTCGCTGCGCTCGGTGTTTCGGTCTGCGCGAACCGGTATCA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 518>:

40 **GNMFU39F gnm_518**

AAGTTTATTTCTTTTCTTTGCTCTATTATATTTCTGTGAATGATGTGGTTTTATTTT
 GTTATTGGAAATAATACGTTATTCATTTTTTCAAAATTTTATTCATTCACCTTTTATT
 AATTAAATTTTCATTTTGATTAAAGTATTAAATTCGGGTTATCAAGGGTTATGATATT

TATTTCTATTTTTTATTTTCTTAATATCTATTATTTATTATAAGAACTAAAATGTCTA
TAATTTTGTTTCATAAAAGCTTATAATTAGCATAAATGCTTAATTATAGTAATAATTA
TACTCTCTAAAAATAGATACTATTATATATAACAG

- 5 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 519>:

GNMFU40F gnm_519

CCTGCACTAATTTAATGCTGGAGACTGAATGCAATCCAAAGTGGCAATATTAAACCT
TCAACTACTTTTAAGTTGGAATTTGTTAATTTTAAACACCAACAGAAGTTTGATTTAAAT
TGGTTTAAAAATGAAAGTGAATCACTGCGTGATTCCAATCACAGTTTGAGAGAATCAAT
10 AAGTTAGTGGAAAGGGAGTTTGTTAAGTAACAATGTTAAGTTAGCACAAATAGAAAGTT
GGTTTTTTATCGCTCCAGCACTGCTTTAGCAGTATTGAGTGGTTATCTCGCTGAACGCG
TTGGGATCATTAATATTGCT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 520>:

- 15 **GNMFU43F gnm_520**

TTTACTGTGGTTTGGATTAACTTATCCTCATTGAATTTCACTGGTAGTGCTGCAGTTCTG
TGATCCGTGCAACGATGGCATTATAAACAGGCAACCAATTTTCTTTATTTTCATAAAACT
ATTGTTCTCTTTGATTGGTAATACCAACTGCAATCACTTCATGAGATTGATTTGTGCT
20 TTATTTTTCAGACTTTGCATGAGTAGTAGTTGGGCTGATCAAAATTTCTAGTGGATCTTGT
TCAACTCAACCCTATTAGGAAAAAAGTGTTAAATTCGTTTGTGCTATTGCTATTGG
TTAAGATTGTGA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 521>:

GNMFU45R gnm_521

25 GTTGATGGCGAGATAACGTTTTCGTAATCTGGACACGTAAATCTAAAGAACCGTTTTC
GAGGGCGATGTAGCGGTTTCGCGCGGCAACCAAAATATTGCCGGGTGCATATCCGCGTG
GAAAAAGCCGTGCGCGAAGACTTGCCTGAAGAAGATTTCACGCCGTAAATCGCGAGGTTT
GTGCAAAATCGATGCCGCTCTGCTTTGAGTTTGGCGATGTCGGAACCGCGGTGCCGTCCAT
CCATTTCGATGGTCAGCACGTGCTGGTGCAAGTAGTCGTAACACACCTTCGCGACAAATCAG
30 CATATCGCTGTTTGGAAATTCGCTCCGAGCTGGCTTGGCAATTGCCGCGCTCGCGCATCAA
TGCCAACCTCGTCGTGAGATATTTGCGAACTCCGCAACCACTTCGCGCGGCTTCAGACG
CTTGCGCTCGGCAACAGACGCTCGACCCAGCCTGCACCAAAAGCGCATCAGCGACAAATC
CTGTTTCGATCACGGGCAAAAGTTGGGGCGCAAAACTTTAACC

- 35 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 522>:

GNMFU45F gnm_522

TAGAGGATCCCTGATCCACTGTAAATTGATCAAAATGCATTAAAGCCAATAGCTAAGGG
GCAATAACTTTATTAACGTTATCAACGGCTTCGTTAACGCCCTTACCAAAATAATTTTTT
GGATCATATCACGTAATTCATTTGCTCTTTCTCACCTGTAAGAAGCACTGATGGAAC
40 ATCGCTTCACCTACATGACCAGATGCCAATTTTACCAACACAAGCTACTGTTGGAACACCC
CGAAGATCAAAAATCTGATAAGCAAAAATATCGGTTATTTTTGAATTGATGTTTAGATTT
GAACCTCCGGGTACCGAGCTCGAATTCGTAATCATGGTCATAGCTGTTTCCTCGGTGAA
ATTGTTATCCGCTCACAATCCACAACAACATACGAGCCGGAAGCATAAAGTGTAAAGCCT

GGGGTGCCATAGTAGAGCTAACTCACATTAATTGCGTTGCGCTCACTGCCCGCTTCC
 AGTCGGGAACCTGTGCTGCCAGCTGCATTATGAATCGGCCAACGGCGGGGAGAGCG
 GTTTGCGATTGGGCGCTCTTCCGCTTCCCTGCTCACTGACTCGCTCGCTCGGCTCGCTTC
 5 GGGTCGGCGAGCGGTATCAGCTCACTCAAAGCGGTAATACGGTTATCCACAGAAATCAG
 GGGATACCGAGGAAGACATCTGAGCAAAAAGGACAGCAAAAAG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 523>:

gnm_523

CCCGTTAAAGCCTTTGATTATTCCAAAGCCTTTGAATAAGGCGTGGCTTACGTAAT
 10 TAGGTCAAAATTTTACGGTTAATTTAAGCGTCATTAAAAGAATTTTGCTTTTGTTAAAA
 ATTTAAATCCACAAGCAATTGTTGAAATAGGTGTTGGTAAGGAGCGTTAAACAAATTTATT
 TGTTAAACTCAAATACCTTACAAGGGGATAGAATTTGATAAACGCTTAATTGAATATC
 TCTAGTTGAAAAGATATTAACTGAAGACCACTAGTTAAAGGCGATATTTCTCAAAAAGG
 15 ATCTTAAATAGTTTTTTGAAAAATTTAAGTCCATTGGGTACCGAGCTCGAATTCGTAATCA
 TGGTCATAGCTGTTTCCCTGGGTGAAATTTGTTATCCGCTCACAAATTCACACAAACATACGA
 GCCGGAAGCATAAAGTGTAAGCGCTGGGGTGCTAATGAGTGAGCTAACTCACATTAATTT
 GCGTTGCGCTCACTGCCCGCTTCCAGTCGGGAACCTGTGTCGCCAGCTGCATTAATGA
 ATCGGCCAACCGCGGGGGAGAAGCGGTTTGGCTATTGGGCGCTCTTCGCTTCCTCGCTC
 20 ACTGACTCGCTGCGCTCGGTCGTTGGCTGCGCGAGCGGTATCAGTCATCTCAAAGGCG
 GTAATACGGTTATCCACAGAAATCAGGGGATAACGCAAGAAAGACATGTGAGCAAAAAG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 524>:

GNMFU50F gnm_524

TGGCTTTTGCAATGCAAAACATCCAAAACACACATAACCTTTGTTAAACAAATCAATAGT
 25 ATCAGATAAAAATCCAAAATAAAACCCCAAATAGGACCAAGATCCATCCGAACAAATGC
 AAGGGGAATCCTTAGAAAACATAATGCTTTAATACATTAGTAACACTAATTGAAAAGATAGA
 AAAGATAAAGGTTAGTGCTAATAAACA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 525>:

GNMFU51F gnm_525

CTAGAGGAGTCCCAAGTTTGAATCGCTATTAAACAAGAAATGAACTTGAGAAAGCTTAAA
 TAAAATTCGCTCTTTGATTAAACAAAAATAGCTCAAAGAGATTTTACTGATTTTGA
 AGGAGTCAAAAACATAAATGCAATTGCTTATTTGAAGAGGAATATTCTCAACATGAAAT
 35 ATTAAGAGTGATCCGCTTTGGTGATTATAGTGTGAGTTGTGTGGTGGCACTCATGTAGC
 TAACACTGCTTCAATTGAAGATTGTTTTATTACTGATTCTTATTCTTTAGAGCT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 526>:

GNMFU53F gnm_526

GGAGCATTTAAAAACCAATAAAGACCAACTCCAGCAGCACTAAATGCAGTAATAGCAGCA
 40 AACACAAAGTAAAAAATTAATGTCATCTTTTAGTTTGTGTGAGTTGTTCAATACATTTT
 TGAGAAATGGGCTTTCGATTTCTCATACGCTTACTTGGCCACACTTGAGGAAGTTTTTGA
 GAGAGAAATTTGACTGGTAAACAACTCACTAAAAAGATGCATGACAGGTACCCAGTTGT
 AGTGAATTAGAGACAAATTCGTAAAGGTACTTTTGAAGATCCAAAAGTTCAATAA

GATGATTGCT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 527>:

GNMFU55F gnm_527

- 5 CCCAAAGCTTACTCAAGAACTCGCTTAGAAAAATATTAAGGGATGGAAAAAAATATAGAG
CAAAATTATCAAGAACTGAGGGTTGTAAAGAGAGATGCATTACAAATGATTAATAAAGAT
AATCACAATGAGGATTAGAAAACTCTTTAAAGCTGAATAGAAAAAATTAACAAAAAT
TATTCTAATCAATTAGAAGAGATTCAAAAAGACAAGAAGAGAATTCCTACCAATTTAA
10 ATGAATGAAAAAGCAAAACAATTCAAAAAAGCGAACTTCAGTATTCATTGCTTTATTA
GTTGATTTTGCTTTTTCTTTTAATTAGCGCATTTGCTGATGGTTTTAACTTTTGATCA
CCGTGATCAGCAGATTTCAATTCAAGAA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 528>:

GNMFU56F gnm_528

- 15 TTTGGAATTCAACTTAACGTATGATCACATCAAAATGTTCAGAGACCCAGATGACGCTA
AGTTAAAGTATGCCACCTTTGTTATTTTGATATTGAAACCACTGGATTACATGGTAGGT
ATGATGATGTTATTGAGTTTTCAGCAGCAAAATTAAGAATAACAGCGAGATGATCATC
AGCAATCTTTTTAAAAATTGACAAACCTATCCCAAAAAACAATCACTGAAATCACCAAAA
20 TAACTGATGAGATGCTTGAAGGCGGTATTGATCAACAGCAAGGTTTGAAGAAGATAAGAA
ATTATCTAGATGATTGTGTTATGGTAGCTCATATGGTATTAAATTTGATTACCCCTTT
TGCAAACTCAATTTGAAAAATA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 529>:

GNMFU57F gnm_529

- 25 CGGTCATTTTACTACGGTGTAAAAACGTTTCATTGCACAGTCGAGAGATTCAATAATT
TTAAAAATTATATTTTATTATTACCACATGCGACTTGAAATAGAAAACGGGCTTGAATT
TGTCAATGATCGTGTGTAATGAACCTGGCAAGATCTGTTTTTTCATCCTTTTACAGG
TAAATTAACAACAACCACTAGTTTCAGAACTCATTCAATAGATACASTTTTATGCCAT
TAACTACCCAGGCGATGGTAATAGTGTATTAAACAAT

30

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 530>:

GNMFU63F gnm_530

- CAAAAAACACTAAAAAACAGTTATTATCCATGTTGGAACCTCTATTGGAACCTGGGAA
AGGTTTATTGCTGCTTACTTGAAAAACAAGTGGTAATTTTCCTTTATGGTTAGCACCT
35 GTTCAAGCGTAATTATTCTGTTAATATCCAAAAGCATTTAAAGGCAGCAAAAAAAGCTT
TATAACAATTTGCTAAAAGAAAAATCCGCTGTAATTTAGATGATAATCAAGATCGCTTA
GCTAAAAAAGTTAGACAAGCAATCATTGAAAAAATTCCTTTACAACCTATTGTGGAGAT
AAAGAAATAGAGAATTAGAGAAGTTGACATGCCGTGGTTTTAAAGGTGAAAAA

- 40 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 531>:

GNMFU64F gnm_531

GGCCCTGCTGGTTATATTGCTGCGGAGTATGCTGGCAACATAAACTTAAACCCCTAGTG
ATTGAAAAGCAATACCTTTGGTGGGGTGTGTTAAATGTTGGGTGTATCCCAACTAAAACG
TTGTTAAAAAGAGCAAGATTATTGATTATTTAGTTCATGCCAAAGATTATGGGTATCACT
ATTAAATGGTCAAGCTAAACTTGATTGAAAACAACCTGTTAAACAAAAACAGGAAGTAGTT
GATAAAATAGTTGCAGGGGTAAAAACAATTATTAAAGGGTGCTAAGGTAGAAAAGTATTGAA
GGGGAAGCT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 532>:

GNMFU65F gnm_532

CCAAAAATGGTTTTTGACCATTCTTGGTAAATTTCTAATAGTCGGGAGTTnTCCCCTGGTG
TTTGGTGACATTTGCAATAGGTTGTATAAATAATCTAAATTTGGATAAAAAATTACTTTGA
TTATTGGTTGAAATATTAAAGCTTTTAAACGCTTCATTTTATCAATTGATTATCAAAAT
CTTTGATTAAATAAACTAACTCTCTTAAATGCATTATGAATTTATCTTTAAATTTAATA
GTTGGTTTAAAT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 533>:

GNMFU68F gnm_533

GGTCAAAAAGCAGCTTTAGAACGATTTAGCAATTAGTAGTGGAACCTTAGCATATAATAA
CGAATTAATAGTGGTTTTAAAGATGTTACTGTTGATAATTTAGGTGATGCTAGAAAGGT
TCARAATAGCTAAAGAAAAAAGCTACTGTTATTGGTGGTAAGGCAATAAGGATAAAATCAA
AAAGCATGTTGAACCTCTAAACGGAAGATTA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 534>:

GNMFU70F gnm_534

TTGGTCCCATCAATTGGTTGGTAAATTTGGGAGGATGTACAAGAGTTCTATATGCAATTG
CCGAGTAGTGAGTTTAAATCCAGTTGAAGCATTGGGGCTGGGATTGTTGTTTAAAGCCAATG
GAGTTGCGCATCGATCGTCACTGATTGAATTTGAACCAAGATGTACCTCTATCTGGGCTT
TTGCCCTTTTGTGTTGCCAACTACTGTTTAAAGGTATATTTAGTCAAAGGTTGTT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 535>:

GNMFU71F gnm_535

CCCGCCTTCAGCGCCAAAACCATTAACAATGACATGAAACTTTTCTTCATATTTGAT
GGTTTGTGTGCAACCATTAGTCATTTCAAAAAAGTTAATTTCAATTACTAAAGCAATATC
AAGGTTATAGGGAACACAAATTTGTTGTTGACGTTTTTTAGAAGC

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 536>:

GNMFU73F gnm_536

CTACTGTTTTTCATTGGAAGCGGATTCAACTGGCAGAGCACTAGTAAATCTCTAGTAA
 TTATTTTGATTACTATCACCATTACTTTTCCACTAGCACTTTAATGCAATTTGACTTA
 ACGAGTAGAATAATTCAAAAGTGGTTAAAAATGTTTTAACTTTGTAATTGATTCACTAA
 5 GTTCAATGCCATCTATTATTTATGGATTATTTGGACTTCTTCTTTTTAAGAGTCTTGC
 AGTTAAGTGCTGGAGGAGCTAATGGTACTAGTTTAATAGCAGGCATTCTAATTATTAGT
 TTGTTATATTACTCTTCCGGGTACCGAGCTCGAATTCG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 537>:

GNMFU76F gnm_537

CCCCAAAGATAAAACCCCTCGCTTCAGGACATACTATCGCTTCTGCATTAATAGCTTTA
 ATAACTGTGCCATTTGGGTTAGCACAAAATTAAATAGTTGGGATTGGAAAATCTGGG
 GTAATGTCATAAAACAATGTACTTGGTTGGGAAATTTCAAAGCGCTTGATTGCTTGA
 TCAAGCAACTTAAAGTTTGTATCCATAAATATCTTTTTTTAAAACTGTTAATCTCTGC
 15 AATTAAGTCTCTTCAATCTGATCAATCTCTTTAAAGGATGTTTTTGTGTTTTAAGCT
 CAAACGGGAATGAACATAGTTGAAG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 538>:

GNMFU77F gnm_538

GACATCTTCTTTCTATCCAGGATAGTTACTTTTAAAGCATGGTGAAGCACGGCATGAAG
 CTTTAAAGATTATTCCTAGTGAATTACTTTTAAAGTGAAGTGAAGTGAAGTGAAGTGAAG
 TTCTCCTTTTCGAGGCAAGTTAACTGACCTGAATATGTAGTTTCACTGTTAGCACTGT
 TGCTGAAATAAAAAAATAGAAATTTGCTGAATGAAGCGAATTATTGTTAAAAATGCAAA
 AAAATTATTTGACATTAAAGTTAAATTAAGCAATTTATTTAACAAATGGATGTTAGAA
 25 CTGAAGAATTAAACGAATTTGTTTTGTTTATCATAAAACTTAAAA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 539>:

GNMFU78F gnm_539

AAATTACCTTGCGTTGACAAACAAGATATTAAACGAGAAGAAGCAGACGAACCTTAAAAAG
 30 CGTTTTGTGAAGTTGGTGCAACTGTTGAAGTTAAATAAAGATGGCAGTACACACACGGC
 GTTCTAGTAAACACCGTCGTGATAAAAGACGTTCTCAGCATGCACTTACTCTACAAACTT
 TAAGTGTTTGTAAAGAAATGTGGAAGAAGAAGTTATCAGTCTGTTGCTGCTTGTGGTA
 TGTACCGTGAACTAAGAGTTAAAAAGCTCACTAATT

35 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 540>:

GNMFU83F gnm_540

AGTTAGTGTAAATTCGCTTCAAAAAACCAAAAGCTCACCAAGAAATAGACCTTGATT
 TCACCAAGCTTGATGAGATTATTGCAACCATTTTGTATGAACCTAAGAAATCCAAAGAGCTG
 GCTTTACTAAGCTTATTAAAGCAGTTTGAATAACCAAGCAAACTAACAAAAAAGATAG
 40 CTGAATTAATAAAGCTTATCATTCACGCCAACCAAAATATCA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 541>:

GNMFU84F gnm_541

5 ACTAGTTTCATGGTAATCAAGTTAATAGGATCAATTCCTGCATAAGCAGTTTATAGTAA
AGTACTGGTTTGGATAAACACCATTCGCATCTGTTTTAAACGAGTTTGAACCTGGTAGTT
CATCTCTCTGGTTTGGAAATTTATCTTAGGATTGGCAAACTTACCCTATAAGAAATGATTG
CGTTTTTGGATCAAAATGGAAAACCTAAGACCATTCCATCTTTATGTATGGTTGATAATC
ATGATCATCTCTTTAA

10 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 542>:

GNMFU86F gnm_542

CAAGAAAAATAGATCAGTAGGATCAATCCTTTTTATGTACCTAGTTTTATCTGATTAT
TGCTATTCTAATTGGTTCTTTTGTGCTGGTAGTTTATGTTGCAAGATGTCAATAATTA
TCGATGATCTGCTTGGGAAGTTAGTTATTTTTCTCACCTAATTTAATTGCAACTTTTT
15 TCAATTTTGTAAACAGGAACAGTAGTTAGTTATCTTTCCCTCGTTATAAATTTGCTGA
AATTAAGTATTTACTGATAAGCTTGAAGAAGTTAGAAAAGCATTGTTAAGTGATAATGC
TAATCACAGTTTTATCTATTCAAGAAACGCTTGGTG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 543>:

GNMFU89F gnm_543

CTGGTTATCTTGGCCTTTTTAGCGCGGTAAAAATGGTGCATTATTTTTGGAGTTTTTT
AAAGCTTTGTTTCACAATTTAAGCCAACGCTTACTTCGTTATGTGCTTCTTGTGAGGG
TTGGGGTGAAGTAAGGTCAATCCCTAAGAGTTTAAATGGTTTCAAGTGGCGCTAAACTAGA
25 AACTGAAGTGAAGTAAAGTAATATCTTTCATCTTTTATCACCACTATTAATTTT
TTTAGCTACTAAAAACCTGCAACTTGGCAATGGCATACTTGTAAACATAGAAAGTTA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 544>:

GNMFU91F gnm_544

ATGTAAACAGTGTTAATTTAACAAATAATGAAAATGAAATTAAGTTAAACAAACTAAAA
30 AAACAATGTGTGAAGATGCTGAAATTTCAAACAATCATTAAGCCAAAATTAGATCATA
ATTTGTGCTCACGTTGTTTTAAAGTGTGTTAAAAAATAATTGTGAAAAGGTTTTAGAT
CTTAATCAGATTGATATTCTCAAGCTTGAAGTTTTCTTTCA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 545>:

GNMFU92F gnm_545

GGCAAAACCTCTTAACAATCTTTGTACACAAATACTATGGCACTGGCAATAACAATAG
CAATGATAATGCTAAAGGGTAAAGAGATTAGTGAATAGAGAAAATCTATTGCGTAACCCAA
CACAAAGTTAGATTCACTAAACAGATCTTGAAGGTTCCGTAACCTAAAGGATTTGGGAGGA
30 GAGATCATACAGATCACTGTTAGCACTAAAACCTTCTGTAAGCTTAAAAAGAGGGGAT
AATGGTAACAAAAATTGTTGTTAAAGCGCAGGGAG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 546>:

GNMFU93F gnm_546

5 ACCTTTTTCGCTTTTAGGTAGTTTAAAGAAAAGGTTATATGCTAGATGAATGCTCTTAGA
ACAGTAAATATTTGCTACAATCATAACGCTTTAGTTTTAGTTGATACACCAAATCCGT
AGTCATTTTATTAACCTAAGTGAAGTATGATTTTATGTAATAGCGCTGTAATAATATCCT
GAGCTGAAGATCAAACTTGAGTCTTATGATAGCACCCCTTTAGATCTCGCTATTAAAAAG
ATAGTTGAGGTGTAAAGGGTGTGAACATTAAAGTTAAAGGTCCTTTACCTTTGCCTACT
10 AAAAGGAAGTGATCA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 547>:

GNMFU94F gnm_547

15 TCCTAAGTATTTGATTACTTTAACCGAATTTGTTGATATTGGTGATCAATTTGTTGTTA
TGTTAAGCCCAATGTTAACTAAACAAAGGTATTAACCTTAGCTGTTGAAGAGATGAAAA
TCATTGCTAAGTGTTTATTGGTTCCACCTGAAAAGTGACATGGACTTACTGATATTGAAA
CCCGCGCTCGCAGCGCTTCTTGATCTTACCTATAACTTAGCAATGCGTGATGTTTTTC
TGAAACGCACTAAGATTA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 548>:

GNMFU95F gnm_548

20 CAAAAATGAAGTACAGATCCACGGAGGAGGAGTTGATTTAAAGTCCCCCACCATTGAAAA
TGAAATGCGCTTACACATGGCTTTATATAACCGACCCATTACCAAACTTGGATGCATAT
TGCTCATTTGATGATTGAAAACCAAAGATGTCAAAGTCATTGCAGAACTTCTTGTTAGC
25 AGTTGATTTTCTTAACCTTCATGATTTTCGTGTTTTCGCTTGAGTCTTTTACCAAAAACA
CTATTAGCATCCTATTGATCTAAACCAATCATGATTGAAAAAGCTAATAATGATATTCA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 549>:

GNMFU96F gnm_549

30 AACCTAGTGAAGCAATTGAAGCAGTATTGAAATATTGGAGTTTTCATCAGGACTTAAAT
TCATTCTGATCGGTGATGAAAAGGCTTTTATAGTGGCTTGATATACTTCCAAAAAATATTA
CAAAAAAATCTGCTAATTTCTTCAATTGAAATGACCGACACTCCACTAAGTCAAGAAAGAA
AAGTTAACAGTTCAATGCAAAATAGCCATAAACTTAGTTCGTGAAGGTAATGCTGATGTTG
TAATTCAGCAGGCTCTTCAGCAGTTTATGCTTCTTTAACAATATGATGCT

35 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 550>:

GNMFW16TF gnm_550

40 CAGCGCTTATCTGAAATAACTGAAACCGAACAGACCTAGATTCGCCCTCGCGGGGAA
TGACGGCTGCAGATGCCCGACGGTCTTTATAGCGGATTAAACAAAAATCAGGACAAAGGGGA
CTAATCCGCAGACAGTACAGATAGTACGGAACCGATTCACTTGTTAAGAAATCGTTCTCT
TTGAGCTAAGGCGACGCAACGCCGTACTGGTTTTTGTTCATCCACTATAACTAAGGAAT

TCAAATTAACCTTAGAATTATCCCTATGAGAAAAAGCCGTCTAAGCCGGTATAAACAGAA
 AAACCTCATTGAGCTATTTGTGCGAAAGTTCAAATTTCCATTTTAAACAATAGTAAATC
 GAGTTTATCCCTAATTGTCCAAGACAACCCCTATAATACTATAATTCAGAAATATAAAATG
 5 GGTTCACATCTAAACATTACGGAATTTTATTCCTCGCCTGAATTCATTGTGCAGATTCA
 ACGAGACCTCATCATGTCAACGACTCCAACTTCCCTACACAGACTTTCAAACGACTGC
 CATGGCGTTAGCTGTGCAACAACACTTTCTGCCTGC

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 551>:

GNMFW46TF gnm_551

10 TTGTTAATATATTTTCGCGATTAACTGTTTCTTAATATTAATTCCGGGTACATCCTTTCCG
 CTGATTACCGCTGCGGTTTCTCCCTTTTCGGCAGTGCAGCAAGTAAGACGTTTTCGCCGA
 ATGTATTGACCATTCATACTTACCCCTTGGTATGAATGGTTTTTTTGCACGTTGAAAAATG
 CCGTCTGACGTTGGGTACCGAGCTCGAATTCGTAATCATGGTCATAGCTGTTTCTCGTGTG
 TGAATTTGTTATCCGCTCACAATTCACACAAACATACGAGCCGGAAGCATAAAGTGTAAA
 15 GCCTGGGGTGCCTAATGAGTGAGCTAACTCACATTAATTGCGTTGCGCTCAGTCCCGCT
 TTCCAGTCCGGGAAACCTGTCTGTCACAGCTGCATTAATGAATCGGCCAACGCGCGGGGAGA
 GCGCGTTTGGCTATTGGGCGCTCTCCGCTTCCGCTCAGTCTGCTGCGCTCGGCTCGGTC
 GTTCGGCTGCGGCGAGCGGTATCAGCTCAATCAA

20 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 552>:

GNMFW72TRC gnm_552

AACCGCTCTGCCCTCATTCGCCACAGGCGGGAATCCATACCTTAGCACAAACAGTAATAT
 TCAAAGATTATCTGAAAGTCCGAGATTCTGGATTCCCGCCTGCGGGGAATGAGCAATTT
 TAGGTTTCTGATTTTGTCTGTTTTTGTGGGAATGATGAAATTTTGAAGTTTAGGAA
 25 TTTATCGGCAAAAATAGAAACCGCTCTGCCGCTATTCCGCTCAGGCGGGGAATCTAGACC
 TTAGAACAACAGCAATATTCAAAGATTATCTGAAAGTCTGATATTCTACATTTCCCACTT
 CGTGGGAATGACGGGATGTAGGTTCTGTGGGAATGACATGGTGCAGGTTATGCGGAATGAC
 GTGGTGACAGTTCTGT

30 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 553>:

GNMFY91F gnm_553

GTGCGCGGATTTTCCAAATCTGTTTGAACACCGCCCAATCCGGTTTGCCGAATTTGCGCG
 TCAGTCCGAATGGGCGGAAGAAATTTCTTGGGATATGAATCTCCTTTGGCGAGTCT
 GCGGCTTCTCGATTCTGTTTCCGGCGCCAGTCCGCGAGCTCGCGCGCCCAAGCGGGCATAC
 35 CGAATTTGGCGGTAAACGAAAATATAGTTTCAAGCGGCAGCTTCAACACAAACGCGCAAGC
 TGACCACATAATCAGGCGCGGGCGGTTTCAAGCTGGAAGTTAGGCGTGCAGCGCGCGGT
 GTACCATTTGCCGCGGCATCGCCAGCTGGTGAACACATATACCTGCGCCATCTGCGCTT
 CCACATTAATCGCTCAAGGTCAGCCAGTTTGCGAAGGCGTAATCGCGGCCACATCAAGAC
 CATGCCGAACAGCGCCCAACAGCGCGAACAAATCCCTGCGCGCCCGTTTCGCCCAT
 40 TCTGCTCGTTTTTACCGCGCGCTAAAGCTGGGCAATCATCGGGTTCAAGCGCGCCATAAT
 GCCCATAAAGGTAATATAAACCGTGGCAACGCGCTGTGCCCCAAGCCAACGCCG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 554>:

GNMGA51TR gnm_554

AAATTATTTTATTTTGTATGAAACCTTCGAAAAACATGGCTCGCACAAATACGGGAT
 ATGGAAATTTTCAGTACGGAAATTTTGGAAATTTGGAGCGGACAGGGCGGAAGTCTATATC
 AACCGAAGGCGGGTTTATCATAACGAAAGCCGAAATGGCGTCTGCTTCTTTGCGTTAGCTA
 5 GCGGGGGAATACCTGGAATTTGAAGAAAGCGGTACGAAAATTACCGTTGAAATCGCGACG
 CGCTGGCATTTTAATGAAACTATAAGAAATTTAATACACATTTTAAAGGATACGAnACT
 TC

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 555>:

10 gnm_555

AAAGACGGCGTTGATGGTTTTAACATTTCGCTCATTTCGGATTGAGCCATGGCAATCTT
 CCTTTAATGTGGTGGAAATCATGAGTGTTCGGACACTGTACTGCTGCCTCCGGTCGAACT
 TGCCGTTTCGGGATATGGCAGACGCATCTCTCCTAACCGCATCCGAAATACCCCCAAACCT
 GACCGAATGCMAAACTGCTGCCGGAACGGTTTGTATGACACTTCTACTACTGGATGTTG
 15 CGGGCGCATTATAATATTTTTCCATCCGCTTGAACATTTATTTACACTTTATTACAC
 TGCGGCGGCAAAATCGGTATACGAGCGTCAATACACGTTAAATGGCGTTTTGACACAGTT
 TGGGAGTGATGATGGAAACACAGCTTTACATCGGCATCATGTGCGGAACACGATGACG
 GGGCGGATGCCGTACTGATACGGATGACGCGCGCAAAATGGCTGGGCGCGGAAGGGCAGC
 CTTTACCCCTACCCCGGCAGGTTACGCCGCCAATTGCTGGATTGCGAGACACAGGGC
 20 CAGACGAACTGCACCGCAGCAGGATTTGTGCGAAGAACTCAGCGCCTATATGCGCAAA
 CGCGCCCGGAACTGCTGTGCGAGTCAAAACCTCGCACCGTCCGACATTACCGCCTCGGCT
 GCCACGGGCAAAACCGTCCGACACGCCCGGAACACGGTTACAGCATACAGTTGCCGATT
 TGCCGCTGCTGGCG

25 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 556>:

gnm_556

CTAGAGGATCCCGTAGCGGTGCTACAGAGTCTTGAAGTGGTGCCCTAACTACGGGTAC
 ACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGGAAGAAAG
 GTTGGTAGCTCTTGATCCGGCAACAAACACCGCTGGTAGCGTGTGTTGTTTGTGTTGC
 30 AAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAAGATCCTTTGGTACCGAGCTCG
 AATTCTGTAATCATGGTCATAGCTGTTTCTGTGTGAAATGTTATCCGCTCACAATTCOA
 CACACATACGAGCCGGAAGCATAAAGTGTAAGGCTGGGGTGCTTAATGAGTGAGCTAA
 CTCACATTAATGCGTTGCGCTCACTGCCCGCTTTCAGTCGGGAAACCTGTCGTGCCAG
 CTGCATTAATGAATCGGCCAACGCGCGGGGAGAGCGGTTTGCATTTGGGCGCTCTcCG
 35 CTTCTCGCTCACTGACTCGCTGCGCTCGGTGCTTGGCTGCGGCGAGCGGTATCAGCTC
 ACTCAAGGCGGTAAATACGGTTATCCACAGAATCAGGGGATAACGCAGGAAGCAATGT
 GAGCAAAGGCCAGCAAAAGGCCAGGAACCGTAAAGAGCCCGCTGCTGGCGTTTTTCC
 ATAGGCTCGCCCCCTGACGAGCATCAAAAAATCGAGCTCAAGTCAGAGTGGCGAAA
 CCCGACAGGACTATAAAGATACGAGCGTTTCCCTCTG

40

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 557>:

GNMGJ04R gnm_557

CATTCATAGTTTGCCTTTTACTCTGTTAATGTGTCTTTTGGTGATAGCAGTTTTAA
 AGTTTGATATAGTCTCACTTGTCTATTTTGTCTTTTGTGCTGTGCTATTGGTGTCATA
 45 TCCAAGAAATATTGTTATATCCAATATTATGAAGCTCTTCTCTGTGTTTCTTCTAGG

AAITTTTAGTTTTTTATTTTAATGTTTAGGTTTTTAATCCATTTAGAGTTAATATTTTG
 CTATGGTGTGAAGATAAAGGCTAATTTACATTGTTTGCATGTGGATGCCAGTTTCC
 AGGGCCATTGTTGTCAGATTCTCCTCTCACCATTCTTTCTCACCTTTAACACTGCTGTG
 5 AATGGCCCTTTATTTCTACCTTACACCATTTGACTCTCTCCTTCCTAGAAAAAACCTTT
 CTCAATCCCACCTTAAACTCAITTAGTGGATTGCATTGGTCTGGATTATCAGAGGTTTCTG
 TAATTAGGTTGGCTGTGCCAATAAATATCTTCATGGATATCCTGAATTTGTTTGTATAA
 AGAAGAAATAGGCAGATGACATTGCTAGTGGATCGTGAGAAATTTGCAATAAAACTCAA
 ATGTGCAAGATGTGCCACATTTGTTGTTCTTTCTCCTCAAAATACAAATATTGGATTGCC
 CTCCATCCGTCACAATTTCTGGGCAATTCAA

10

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 558>:

GNUMG65TF gnm_558

AGCATGGGCAGCGTATCGGCGGCGGCAAGAAAGTCGCCGCCGCAACACGACCACT
 15 CCCGCATAAATGSTTTTCTTGCGCCCGAAGTGTGCGAAGCGATGCCAAAGGGAATTTGA
 ACAAACCCGGGCAACCCCTTAATGGCCAAATGGCAACCCGCAACCGTTTGG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 559>:

GNUMGL93TR gnm_559

CGTCTGAAGGCTTCAGACGGCATTGTCGCTTTGTCGGGCGGTGTTAGGGGGCGGTAAAC
 20 GCGGTGTTTCGGCACTTTGTCATATCCAGTGTGCCACCGCCAGTCGAGCAGTTTCGGC
 AGGGCGGTTCGGTTCGGTGCTTCGGGCAGCTTGAGSTAACGGAACACTTGGCGGATGAG
 TTGTTCCGCGCGGTTTAAAGCCAATGCGGGGGCGAGCGTCTGTTTCGACCAAGTTCTGCCC
 TTGTGCGTTGGTCATCAGCGCGCAGGTGGGCATATTGCGGTGCTGTAACGTCCTCAACACTG
 25 CTGCAATAGGTTTGGCGCTGCGTGGCAACGAGCAAGTCTTGTCCGCGGACGATGTGGGT
 AACGCCCTGTTTCGGCATCGTCGGCAACGACGCGAGCTGGTATGCCAGTAACCGCTGCG
 ACGACGCATGACGAAATCGCCGATGTCGCTGGCAGGTTTGGGCGTACCCGCGACGAT
 GCCCTCTGAAAGCCGATAAT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 560>:

GNUMGO35TF gnm_560

GAAATGACATATTCATAAGTTTCCCGAAATCCAACATAACCGAAACCTGACAGTAACCGT
 AGCAACTGAACCGTCATTCCCACGAAAGTGGGAATCTATAAATGAAAGCAACAGGCATT
 30 TATCCGAAATAACTGAACCGAAACAGACTATATCCCGCTGCGCGGGAATGACCCGCTGC
 AGATGCCCGACAGTCTTTATAGCGGGTTAACAGTGTACAGGACAAGCGCGCTACGCCGCA
 35 GACAGTACAA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 561>:

gnm_561

AGCATGGCGCACAGCAATGCCSTCTGAATACGCCCTCCGCTCGGTACACGGCGAGATCGG
 40 CAATGGCAGCGGTACTTTGGCGCGGATATGCTTAAGTTACGTAACCTTACGCCACCAAA
 ACCCTTGCTAGCTAAGGGTTAAACAGCTCACTTGAATCTACTTAAGTCTAATCTAAACT
 ATCCAATATGGATAGATTTTAAACATAGGGCAAGCAGCAAAATATTGTAGCTGAAAGC
 ACAATCACTCGCTGGTGGTCTCAACACGTCGCGACTACCTCGCCGAAACACTATCAGC

CGGGATAAACCGTGGGAAAAGCTCGTTATCAGCGCGCGCACTTGGTACTATCGCGGGAAA
 CCGATGCTGCTGCTGAAACGCACACAGAGAAAAATATGAGCCGTACCTGATTACCTTTGA
 TATGGATACCAACTGCCTGAAAGACAATTACCACGGAAATAACTATACCAATGCCCTACTC
 CGATATTAAACCATCTTGGCTAGACATGGATTGAGAACATTAGGGCAGTGTTTATCT
 5 AGGCCGTGAAGGCATCAGTGAAGCACACGGAAACAATAGCCATTGAGGAAGTACCCGCTCG
 GTTTGATTGGTTTTACTCCTGTATTCAAACATTAAAGTTTTACCGCCTTGAAGATGATT
 GAACGCACAATTTATCGCTGATGGTGTGTATCAAGCCAAACAGGCTTCTCTCAACCGTGT
 TGAACAACCTTCGTATATCCCTAACAGAAGCTGGATTGTCTGATGAGCAATCAATCAGGT
 TCTGGAAGAAACAGAAATTTGAATTGGAAAGTCTTAACCTGAAATTAATTAACCTCCTTT
 10 ACTCACCACATCCGCGCAGCTCTGTCACTTTTGGCGCGCTGCGGCGATTCTTGCGCG
 TTTTAGAGCTTCGGGTAsGGTGTGAAACAACCTCACTCGAAATTTACTTAAAGTCTAATCTA
 AACTATCCAAGCAGTAATTAGTACAAWAAAAGGCAAACTATTTTAGGAGTTTAAAAATTGC
 AGCTGCGATAAACCGTGGGAGAGTCTCGGCATTTCCGCGCCACTTGTACAAACGCTGGC
 AA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 562>:

gnm_562

CATATAGCCGATGGTATAGATATGCACCATCAACGACACGCGCGTTACCACGACCATCAT
 CATCGCGCTCATCGTATCGACCAAGAAGCCGACGGAGAAATCCAAGCGCGCCATTGTCA
 20 CAGGTATAGACATTCTCGTCAAACGTGGCGCGCTGCCGTCAATAAAGCCCCACAGCAC
 ATAAGCCGACAGCAGCGCGGACACCGCCAGCGCGAGTATCGTAACCGTATGCGCACC
 CGCAGCTCCGATTTGTTCGCGAACAAACCCGCAATCAGCAGCGCTGCCAACGGAACAAGGGC
 AATTATCAATATAAAGTCATATCGTTTCAATTTGATTGAATCCGATTGATTTAAAAATCTA
 TGTTTGTTTCGTACAAATTTACTTCGGAACAAACAAATCCAAACAGCTCCCAATCGTTTGC
 25 TGCCACAGCTAATTGCTCTTCAGTAATAAATCAACACCGGCTTTGTAAACACAGATA
 TTCCATACTGTATTTCAAGGCGTGGACTCCGCCACCACTCAAAATCAGCTTGTCTGGCG
 CGGTTAGTTCGGAGATGACCCTTTGTCCCTCTTTCAACCGGCTTTTACTTTCGGTAT
 TCATACTGCTCTCA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 563>:

gnm_563

CTTCAACCATGCCAAAACGGGACGAGCGCGGTTGTGCACTTGTCTCATCAACACGCCCCG
 CATCCAAGACTTCATCTGAAGGGCGACTGATGAACATCAGTAAATCATGGAAACCGC
 35 CAAACCGCAGGAATGCACAGATGGATCAAACCTTTTCGAACTGTACCGTCACGGCAT
 CATCAGTTACGAGAAGCCCTGCGCCAGTCCGTTTCCGCCAACAACTTGCAGATTGCACAT
 CCAACTGCACAAAGAAGCCAAACCGCCGAACCTCTTTACGACAGGGTCAACGGTCTCAA
 CCTCATTTTCTGATCCGCCAAAACCAATGCCGTCTGAAAACCGCATCCCGGTTTTAGAG
 GGCATGATTTTATCCGTCGG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 564>:

gnm_564

CGAACAGTCGGCATTGCGCCCGAATTTGGCAGGCGTTCGACCGTTGGGGCTGACGCA
 TTTGGTCAGTATTTGCGGTTTGCACGTTACGATGGTGGCGGTGATGTTTGCCTGGCTGGC
 45 GAACGGGCTGCTTGCTGTTCCCGCGCTTCTGTCACGGTTCGCGCTGTGGGTTTTCG
 GCGGGGTGTGATCGCTCTGTTTTCACGCTGCTTGCCTGTTTTCGTCGCAA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 565>:

gnm_565

```

5 ATAGCGGATGTGGTCAAGTGATCGACGAATACAGCAACCGCCGACGGCGAGCTGCC
  CGACATCTCTGACGGCGGGCATTATACGCCTAAGGCTTATCGGGAATAGAGCTTGGAAACAG
  GACGGTATCGCGCCGAGATATGCTGTCGGCGCAAGAGCTGGCGACGATGTTTATCCCGCAA
  GAGGTGCGAAAGTTACAGCGCGGCTGGCTGGATCATGCTTAACAATCTTATTTCCTCAAC
  CGAGCTGGCGGAGTATCACAAAGACGAGGTACGGGTACGCTACGATCTGAGCGATGCGTC
10 GCGCGCAATGTGTTGATATGGACGGCAAGTTTATTACTAAGGCGAGGCCAACGCGCAA
  TACCGCGAGGCTTCCGACGGCTCGTATCGACCGG

```

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 566>:

gnm_566

```

15 CTTGGGTTTCATCGTCTTCTTCCCAATCTGACCCCAAACATTGCGCTTTTGGTTTGACGTG
  ATGACAGGTAAACATACCTTTATTTTCGGTCTTCACGGGCTTGGTTCGGGCTGATTCGCC
  GTTGAAAAGTCTTTTTCGATGTCAACGCGTGTGATTTTGGCGGATTCGATTAGTCAG
  GAATGAGAAAAGTCGTGATTCACGCGCTTCTTTGCGACGCGCAACCGGTGCCGCGTGC
  TTGAAAAGAAATGGCATTTTGTGTGCGCGCAAAATGGACGCGACGATAGGGCGCTCTTC
20 CGAACCCATCAACCAACAGAGCTCATACATACGACGCCCGCAAACTTTGGATTCTTTGTA
  GATACCGGAACCGACAACCTTCTTCGG

```

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 567>:

gnm_567

```

25 CCGGCATCCTGCCCGAAGCGATGCTCAACTATCTGGCACGCTTGGGCTGGGCGCACGGAG
  ACGATGAGTTCTTCACAAATGGAACAGTTTCATCGAATGGTTTGATTGAAAGACGTTTCCC
  CGTCTCCAAGCCGTATGGACTTGAAAAAATCTACTGGATCAACGGAGAACACATCACAA
  TCACACACACGGCAAACTCGCCGAATCGTCAACCCCGCCTTGCCTTGCAGCATATTC
  ATGAAACCGAAGAACTGCTTTGGAAAGATGTGTTGGAACTGGTCAAGACCGCACCCAAAG
30 ACTTGGTCACGCTTCCCG

```

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 568>:

GNMG592TR gnm_568

```

35 CGCCCAAGAGTGCAGACATCGGTACGAAATGCGCGTCTTCAAACCGAGCTGTTCGGCAA
  GTCGGCGGTATGCCTCCACAATGGCGTTGAATTTGCTTCGCTGTAATCCAGCAGGTCCA
  TTTTGTGACCGCCACCACAATATGCGGGCAGTTGAGTTGGCGGAGGATGGCGGAATGAT
  GTTTGGCTGCGGCAGAACTGCAAGGGCTGCGCGCCGAAATCCAGTTGGGATGCGGTGAA
  CCAGCAGCACTGCCCGCAAGCGGTGCTGCGGCCGTAAACATATTGCGCGTGTATTGTT
  CGTGCCTCCGAGTGTTCGGGATGATGAATTTCCGTTTCGCGCGTGGAAAAATAGCGGTATG
  CCACATCGATCGTAATGCCCTGTTCCGCTTCGGCTTCCAGTCCGTCGGTCAGGATGGCGA
40 GACCAATGCCACGGTTTCATGCCGTGAAACCGCGCGCGCCGTTCGCGT

```

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 569>:

GNMG594TR gnm_569

ATCTGCTTTTTTACCAGCGCGCGGTTTGGCGCTTTATTGGTAARATTTGGGCGGATCGAT
TATGCTGCCACAAAGCCGGTAACTCCACTTCGAATTTATGGCATGAATGATGAATCAAAAA
CCGGTTGAAGCCGTTTTTGTCTTTGGCGATGGTTTGCATATTCAAAAATTCGCCAAT

5

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 570>:

GNMG751TR gnm_570

CAGGATCCTTGGTGGCCTCTGACGGGTTTCGGGCAGGCTTAAAAGCGCAGGCTGTTGG
AAATCGCGCTTCGGCTTTTACCAGCGCTTGGCGATGGTTTCGTGGGTACAGCCCGAAT
CGTCGGCAAGCGTTTCAAGCCTTGTGCTTTCGTATGGGGTTGAGGTTTTTCGCCTTGA
GGTTTTTCGATCAAAACCATTTGCCAATCGGGTTTCGTGCTGATGGTTTGTATAACGGCGG
GGATTTCGGTCAGCGCCGCAATCTGTGCGCGCGCCACAGCGGTTTCGCTGCAATCAGTT
CGTATCGGGACAGTCCGTGTTCCGCGACGATGACGGGCTGTATCAGGCCTTGGCGCTTAA
TCGAATCTGCCAGTTCTTGCAGGGCTTCGTATCGATTTGAACACGCGGCTGATAGCGGC
CGGGCGGAGATATCTTTAACGCGCAACCGTGGTCAATCGGTCGCGGCTGCTGTTTCGCGC
CGTTGGCGAGCAGCGAATCCAGCGCGCGCCCAATCGCGCTTTTACTTTTGCCATACGCG
CTCCCGTGGCTATTTCAGATAGGATGTTAAATCGGGTATTTATCGGATATTTGGGTGTTG
CCGACAATTTGTATCCGCGGTTTATCGGATTCTGTTTTTCACTATAATAGCGCGTTTGC
CGTTGCAnGCGGTTTTATGGG

20

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 571>:

GNMG789TR gnm_571

GCCTGTATGCTCTCTTTGAAAGTTTCGTATACGTCATGGGCTAAAAGGGCTGTCCGAC
ATAAGGAACCTGCCCTTGTGCTTAATTTCCGCGCTAAGCGGGCAAGTTTCCGACCCCCGC
CAATACGCCAGCGCGGAAACTGATGAAGATACAACCGAACTAATTTACCCGTACTTGA
TGCTCCAGTAGATACATGCCCTAATTTTAAATCTTGAGCTTCTGAAGTTAAATATCTTCC
CGATTCTCTATCAAAATACACCTTCCAAATTCCTCTCTTTTGTGCTATGAACTCGAAT
ACCTAAATAGTGGAAAnnGnTCCGACAGCAGAGTCCCAAGAAAAATTACCCGGAGCATTTA
CTGATGCCAATGCAAAATTTAGATACAAAAAACTAAAGCATAGGATAATCTTTAAAAAAT
TTCGCCCTAGGATAATAAACAATACATTTTGGCTTCATCTAATTTAATTAATGTAGAA
GAATCAGGGAATTGAATTTCTATAAAATCTCTATCATACGATGAAAGAAATTCCTAAAA
ATATCAAAATGAAACGAAGTTTAAAAACCCCTTTTCTAATCAATTCCTCATATAAAT
AACGCTTGTGGTAAATCTCTATAAATATGTGAATCAGTTTGAATTTAACTAAATGATA
TTCAGAA

35

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 572>:

GNMG790TR gnm_572

TGAATATCCAGTCCAACCTTGACGAACCCCTTTTCGGCGAGCATTACCGGTAACCGCGGGA
AGAAGCCAAAGCCCTGCTAGGCGGGCGAGCGTTACCGTTTCCGAAAAAGGCGCTACCGC
CAAGTCCACAAGTTGGCGCAAAAGCCGTCATTGCGGTTTCTTCCGAACAGGCGAGTCCG
GATCCCGTCCCTGGTGTTCGCGCATCGCGCATGCGACTTCCAACCAACCGCACCGCCAT
CTCGATCTCGTTCGGCTACTCCGCCAAAACCAATCTGCATTTTCAGACGGCAGACACA
CCGACGAGAAACCATTTATGCAAGATCCCAAGAAATCAAAACGCCAAATCCCATACCAT
TAATCAGAATTCCTCTATTTTTCGAATCCACTATTCTTCCAAAGCGGCAAAACCAT
ACCGTCCGCAAGGCGAAACGCTCAACAGATTCGCGCGCCATCCGCCCGAAACACCTG

45

ACGGCTCGAACAGGTTGCCGATGCGCTGCTGAAGGCAAACCCAAATGTTCCGGCACACGGC
AGACTGCGTGCGGGCAGCCTGCTTACATTCCGAATCTGAACAGGATAAAGCGGAAAC

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 573>:

5 **GNMGU42TR gnm_573**

CGTTGTTCCGGTTCGGTTTTGTCATACCAAAATCCTTATTTCTTCTGTCAGATTTATG
AATTATTTGTGCAGCCCGCATTCCTTGCTGTTTCTGCCTTCCCACCACACCGCCCGGAG
CGGATGTCTTCGCCCGCCTTGACGGGGCGGATGCAGGGTTCGACGCCCTATGCTGGGAAAT
CCTTGACGGGTACAAATCGCTGTGAGGCACATTGTTGGAGAGGATGTAAGCCACACGTCG
10 GTTCCGACTAGTCGAAAAATCGGGTTGATTGTCGATGCCCGTCCGGCATCGTATTTCG
GCATACAGCAGTTCCGTGCGTGTGGCGGATTGTTCCGGCGCTTGCCTGTAAGCCACGCG
TCCGCG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 574>:

15 **gnm_574**

TGTCGCGCTGACGCGTGCCGAGGAACAGCTCAACATCtAtTcSgGcTaCtCtCCAAACs
GcaAAAAACACCCCCCGCCTACwTGATTGAAGGCTCGccAgaCaTsCGCGGGAATGACGG
CATTTCTGCGGAATCGGATTATTTCCAAACCAAAGCGCGTGGTTGCGTTTGCCGCGCC
20 GAAGGATAGTGATTATTCGCCAAACGTTTGTGTCGCGCTTCAGCAGGCAGGCATCGTCGG
GGCGTTCCGCGCGCTGGTTGGGGTTGTTGGCTTCGCGAGGTTTGCGGTGAGCAAAACCG
CTTTGCTGTTCACAAAGCCGCGCGCTTCTTATTGGAGGATGCCAAACCGGTTTTTACCA
AGGCTTCGACGACATTGATGCCGCTCTGAACTTCAATGCAGGCAGGCGCTCGAGGGCGA
GCTGCTCGAAGTCGCTTTCCGTACGCGTGCTTGGTCTTCGGCAAAACAGGCTTTCGGAAA
TGCCTTGGCGGGCGGCAAGGGCTTCTTCGCGGTAATCAGGCGGGTCATTCTTCTCGGCGA
25 GGATCGGTTGCGCTTCGGGCTTGCTGCCGCTTGCCCTTGCTTTGGCTTCGATGGCATCGA
CTTCTCGATGACAGGAAGGTAAGTATTTCAGGAATTTATACACTCGGCATCGGCGA
CTTTCAGCCAGAATTGGTAGAATGATAGGGCGAGGTTTTTTTCGCGTTCAGCCATACCG
CGCCGCTTCGGTTTTGCCGAATTGGTACCGCTGATTGGTTACCAAGGCGAGGGTCA
GACCGAATACTGTGTTTTGTCGACGGCGCGGCTCAGGTCGATACCGGCGGTGATATTGC
30 CTCATTGGTCGAGCCCGCGG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 575>:

gnm_575

TACCGCGCAGCGGCGTTTGAATAGAAACCGATCAAGAGATACGACACCAAGCCACC
35 TTCCCAACCGAAGAAGCTGAATGAAGTTGTTGCTCATATCAGCATCAACATCTGAA
TGTAACCAAGATAATATAGCTGAAGAGCGTTGGTAGCCGACTTTTTCATCGTGATATA
GCCGATGGTATAGATATGACCATCAACGACACGCCCGTTTACCAAGCATCATCATCG
CGTCATCGTATCGACCAAGAACCGACGAGGAATCCAAGCCGCCATTGTACGCCAGGT
ATAGACATTTCTCGTCAAACTTGGCGCGGCTGCCGTCAATAAGCCCCACAGCACATAAGC
40 CGACAGCACGGCGGACACCGCCACGCGGAGTATCGTAACCGTATGCGCACCCGCGAGTCC
GATTTTGTGCCGAACAAACCCGCAATCAGCGAGCTGCCAACGGGAACAGGGCAATTAT
CAAAATAAAGTCATATCGTTCTATTGATTGAATCGATTGATTTAAAAATCTATGTTTG
TTTCGTACAAAAATTACTTCGGAATAAATCAACACCGCTCCAAATCGTTTGGCGGCCAC
AGCTAAATTGCTCTTCAGTAAATAATCAACACCGGCTTTTGTAAACACAGATATTCAT
45 ACTGTATTTACCCGTCATTCCGGGACATTTCCGCCCTGCTCGGCAAAACCTTTGTCGCACC
TGCCAAACCCAAAGCAAGCACTTCGCCGAGATAGA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 576>:

GNMHA81TRB gnm_576

5 AGAATACGCGCGGGTCAGAACACGCCGACCCGTCGCGGTTTTGTCTGTTTTGAATATT
 CCTCTAAATACGGCAGGCGGTTTTATCGACGGACAAACCGGTTTTACGCGCCAGTTTGC
 TCAAGGTGTCGAGCATACCCAAATCGTAAACGGCGATGCGTTTCGGGGTTTTGCGGTATT
 GAACGTGCGCGCGCGGTTTTGACGGTAACGGACGCGCTTCGGTTTGTGCGCGGAAAA
 CGGCTGTCTTTGGCTTGTGGGGCAGAGTCGGAATTTTGGCGGACACGCGCCCAAAG
 CGAGGGCGGTGCATACGGCTAAAGCAGTCAAACGTAACATACGTCTCCAAAATGGGG
 10 ATATTGGGGCAAAGCC

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 577>:

GNMHC73TF gnm_577

15 TACTCTAGAAGGATCCCCGGCTAAAGAACTCGGCTACGCCTCCGACCTCGACCTCGTCT
 ATCTCTACGACGACCCCGACCCGACGAGGCGAGTGTACAGCGCCTCGCCCGCGCC
 TGACCAACTGGCTTTCGCGCGCCACTGGCGCAGGACGCTCTACGAAACCGACCTCGGCC
 TGGCGCCCTAATGGCGACGCGGTTTTCTCGCCACAGCATCGCCGCTTTGAACATACT
 AGCGCGAAACGCCTGGACGTGGGAACACCACCTCGCTTACC CGCGCCGCTTCATCTGCG
 GCACGTCCGAGATTACGGCGGCTTCGACCGCATCCGACCGAAATCCTACCGCGCGAAC
 20 GCGACCAACCGCCTTGGCAGGCGAAATCATGAAATGCGCGAAACATGTTCCCGACC
 CACCGCCTGCCGACGACACGTCAAATACGCGCGCGGTGGCGTGGCCGATGTGCACTT
 ATCGTCACATATCTGACACTTGCCCATGCCGACAGTATCCGCAACTCTTGGACAACATAC
 GGTACCATCGCCCTCTTAAACATCTCCGCCGACTCGGTTTTGATTGACAAAACCTCGCC
 GGCCACAGCGCACCGCTATCGCTTCTACCGCG

25

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 578>:

GNMHF24TR gnm_578

AATTCCAGCTCGGTAGCATTACGAATTCGAGCTCGGTACCCAGCACACCCCTTACATGT
 ACCTTGTGTGGTGCATTGGATCTAGCAAGAAAGGTATCCATTGTTCGCCACAAAATC
 30 TTTATCATGCACGATTGAGTAGGATCCGCTGTATAGTTTTGCGCTCTGCACCCGTATA
 GGTATAGCCGTTTTCTGTAAACATCGGCGTAATCATCTGCACATTTGTGGCTGTACC
 ATAGAAACGTGCTTTCTGATTGGGCAATGCCATTTGTTTTGATTGTTTACCCAAATC
 TTTTAAGGAAACGCTTGCTGTAATTCGCCACGACTGTGATTACTGGTATCAACCGACCA
 GCCGTATACCCATTTTTGAACCTCTCGATAAATATCTTGATTAGTTTTCTGAATTTGGT
 35 TTTGAGTAAATAGCCTTGGCACACTTTATTATTAAATGGTCGTACCCGACATACATCAG
 TTCAGAAACAGAGCTTGACCGAGCCATAAAAAATCTTTATTTTGTATTAGAAATCAGA
 TTTATATTTCCCTGTTGGAGGATTCATGACTGCAATAAGCACACTACCGTTTGACTAAT
 ACGATGTTGTTTGTGCGTTG

40 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 579>:

GNMHF55TR gnm_579

GTACTATCCGTACTGTCTGCGGTTGCGCGCCTTGTCCTGATTTTGTGCTGATTCACATATAT
 CGACATCGCCAAACGAGACTTCGTATCGCCGTTTCGTCTTTG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 580>:

gnm_580

```

AATAGATTAAGATATAACTATTAATAATTTTTAGATAGGATTATCGGAATTAAGTCTT
5  TTATACCACGCTGTCGCGATCGGTTTATAGCGTATTGTGCTATATGTCGTTATGTTAT
  ATACCGGTTGCATCAAAATTTAAGCCACAGGCTTTCCGACGCGTTTGAAAGTTGATTT
  TCGATAACTTTGGAGACTTAAACAATGCCTACCCAATCAAAACATCGCTCTATCAATATCG
  GTCTGATACAGGCAAGGGAAGCCCTGATGACCCAATTACAGGCTATTCTGAATCAGGCGA
  ATATTACCGATCAGCAATGGCGGATTATCCGCTTTTGGCGGAAACAGCGACGCTGGACT
10  TTCAAGATTTTGGCGAATCAGCGTGCATTTTGGCCCCAGCCTGACCGGATCTCTGACCC
  GCCTTGAAAAAGCGGTTTGGTTGTCGCCCTGAAACCTTCCAACGACCAACGACGCTGTT
  TCTGAAAGCTGACTGCCGAGGGCGAGAGCTGTATGAGGAAATCGGCGAAGAAAGTGGACG
  AACGCTACGACGCTATCGAGGAAGTGTGGGCCGCGAGAAATGCTGCTCTTAAAGACC
  TGTTGGCAGAACTTGCCAAATCGAGGATGCGTTGAACCTCGTAATACGCCGTAAACGCCG
15  GAAACGTCGACCGACGGCTTTTGAATCAAAACTGCTGCACATGGGGATGCGCTTGTGT
  GTCGACTCTTATATAGGGGACAGTTTAAAGGGGAAAAATGGCGGATTTCAGAAAAAATT
  TTCAAATCTCGTTCCGTGATGCGATGGCATCTTGCGCGCGCAGGCGTTTCAATGTCATCCA
  CAGACGGTGGCGGACGGCGTTACGGCATTACAATGACGGCGGTGCGCGCGTTTACCGAGC
  AGCCGCCACCGTGTGCTGTGTCATCAACCGGAGTGCAGCAATCATTCCGATCCTGTCCG
20  AAAAGCGGACCGCTGTCATCAATACGCTGGCGGACGAACATCAGGATGTTGCCGAAACTT
  TTGCCGGCTGACCGGCTCTGCGCCGAAGACGGGTTTGCTTACCACATCTGGCATCGCG
  GCAAAACGGGACAACTTGAATAGAGGGCGGTTTGGCGCACCTGCAGGGCATATTGTGG
  GCAAACTGAAATCGGCACGCAATTTGTGTTTACGTACAGGCTCGACGAAATCAAAAACT
  GCGGGTGCAAAACGCCCGCGCTGCTGATTTTCAAGCGGCAAGTTAGATTTTAGACTGTAT
25  ATTCGGACAGATATATGAAGCGATGATCTGGCGGACGAGCGCGGCGAGCGTATGCGCC
  CTTTGACCGATACCACTCCGAAGCGCTGCTGATGTGGCGGTAAGCCTCTAATCGGTT
  GGCACCTATGCGCTCTGAAGCAGCGGGGTTTACCGAAATCGTCATCAACCACGCTTGGC
  TGGGTCGGCAGATAGAAGATGCTTTGGCGACGGCTCGGCTTATGGCGTGAACTCGCCT
  ATTCGCCGCAACCCGAGGCGGTTTGGAAACGGCAGGCGGATCGCGACGAGCATGCGCG
30  TGTGGGTGGGACGCGTTTGTGTGGTCAACGGCGACGTGCTGACCGACATCGAATTTA
  CGCGCGGTTTCAGACGGCATCGTCCCTGCCGGAACATATTCCGCCCATCTGTGGCTGG
  TSGAAAAATCCGCGCACAAACCCGACGGCGATTTTCCCTGCTGCCGACAGCAGCGTGC
  GGC CGGAAGTAATGGCGCAACGGATTGACATTCAGCGGCGTGGGTATTACCGTCTGT
  AATGTTTGACGGAATCGAAGCGGCGAGTTGGCGAAACTCGCGCCGCTATTGCGTGGCG
35  AAAATGGCGCAAAACCGCGTGAAGCGGTGAGAGCATACGGGCTTTGGCGTGATGTGCGCA
  CGGTATCGGCTCTGAAGAGGCTCAAGCCCTTGCAGGGGCTTGGAAGTAAAAACCGGTT
  TCAGACGGTATGGCGGATTCGGTTTAACTGTTTCAACGCCAGCACCAACACCGCGCGTT
  ACCAGCCCCAAGCCTATCCATTCTGCTGTGTTGGGCGTTGCTCCAAGAAAACACCGGCC
  ATCAGCGCGACCAAGACAGGCTGAATTTGTGATGGGGCGACTTGCAGGCGTTGGC
40

```

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 581>:

GNMHIO3TRB gnm_581

```

CCCACAGAAAAACGGTCAATGCTTTCAGCGGGATTTTTTGGGGAAATTCGTATGTCG
CTGTCGGATAAGGTTTTTATTCTGCTAAATCTGCGCGGCTCCAAACATCCTTTCCCT
45  CTCCTCTCTCGGCTGGTGCGCTTTGTGAATATGCTGTGAAACTCGGGGACTCAGAC
  GGCATTTTGTTGCCGCGCATCAGTCGGCAAACTGTTTTTCATCCTCTCGGCGTCTT
  GGGACTCAACAGATAAAGTGGCTGTGGGCGTGCACGACGCGCTTCAAACCGATAGGCT
  CTCGCCGTATCGGCACAGAATCCATAATCCCTTCATCAATATTGGGATGGTGCCTGTA
  TTTTACTGAGAAGTTTTCTGCCGATCGCGGGTACGGAGTTCCAATGCGTACTCTTCTT
50  CCTGTGTGGCAGCGTCGGCAGCATCGGAGGCTGATTCGTGTTCTTGAGATGCCCTGTGC

```

TAGCGGAAGCATTTCGATGAGTTCGTCTTGCAATTTTACTAGCAATTCGCGGAAAAAG
CTA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 582>:

5 **GNMHL46TF gnm_582**

AAAGCTGGCTTGCCCGACACTCAGACGGTCTCCCGCCGGCATTTCACGCCGCCAACCT
ACGGGCGCAAAAGCCGAATCAACGCCCAAATAACCGCCAGCGTAACCGCGCCGGCGTA
TTGGC

10 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 583>:

GNMHN01TF gnm_583

15 CAAAATACCCTTATAATGAGCTTTATGTAGCCCAATCCTAAATCGGGGACGAGTAGTTGG
TGCGAAACAAACGGGTAAACACCGCCGCTGCCCGCTATATGCTGCGCACGGAGT
CGCGGTGCAGCTGTCCATACTTACCGCCAAACCCGGGATGGCAATTTTCGGTCGGCT
GGAAACATTACCGCCAACGCTACCGCGAACAGGATAGCGGAATACAATAACGCCGAGGCA
AGACGGGTTTTA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 584>:

gnm_584

20 TAAATTTGTTGTTGCCGATCCGGTTATTGTTTGTCTGACTTGATTTTTTCCGTGAGT
CTCGCCCGTAAGCGGGAAGTGGCGGGCAATGCGTGGCGGAATGTGGGTAAAGCGCGATT
TTGATTTGTCCGAATGCTTGAGAACCCCTCTCTTTAAACACCCCTTGGATTCCGATTTC
AGTGCAACACTAGTGATTAGTGGTTGGAACAGATTCAAGAATAAAACACTTGGCGTTTC
25 GTAGCAAGTGTTTTCTTGGTCSGTGGTTCAACTCATCTTGAACCTTGGTATCTCCCG
ATCACTGATGCTTACGGAATCGGTTTGTTTGGGGAAGTATTGCCGGATGAGTCCGTTGGT
GTCTCATTCAGCCCTTTCTCCCAAGAATGGTAAGGACGACAAAAATAAGCTCCCGCTTT
CAATGCTTTGGTTATTTTGGTGTGTGGTGTAGAACTCTTTGCCGTTATCCATGGTAATGGT
GTGCACCCCTGTCTTTATGTGCTTTAATGCCCTAACAGCTGCCCGGGCAGTGCTCTTCGGC
30 TTTGAGGCTATCCAATTTGCAGATGATGGTGTAGCGGGTAACGCGTTTCGACCAAGGTCAA
TAATGCGCTTTTCGTCTCTTTGCCGCAATGGTGTGCGCTTCCCAATCGCCGATACGGGA
TTTCTGGTGCAGATAGCGGGTCCGTTTCTATGCCGACACGGTTGGGTACTTTGCCCTCT
GGTCCATGTGCTGCCGTAGCGTTTGCGGTAGGGTTTGTGTCATATTCTGAGATGTTGCCA
CAACGTGCTGCCGTGCTTTTGTCTTGGCGAAGGTAGCGGTAATGTTGCTGTGGTGAG
35 CGTGATCTGGTGGTGTTCACACAGGTAGCGCATACTTSTTCGGGACTGAGTTTGCGGC
GATAAGGGGGTCGGG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 585>:

GNMHT04TF gnm_585

40 TATTTCGGGCGTGATGGAATCCAGTCGTCCCGATGGCATGAACACGCCCTTTGCCTTAC
GCGATTGTAGCAGGTCTTCGGTGGCGGCAGAGCCGATCAGGACGCCCTTTGCCACCG
GCTGTTTGGTTGCCTTGCTGTACACGGTTACGGTGTCCATACT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 586>:

GNMHV42F gnm_586

5 GCCATTTTGGGCATTGTTTTCGCTATACCGTGCAAGATAGCCATAGGGGATAACCATTT
TGSTGCCCTGAAATCAAATGTAACCGTATGTTCAAAATCCTGTCATTGGCTCGGGATTGT
TGAAACTGGTTTGTTTCATTAAAGGGTCACATGAGGGCATAGTAAAACTACTCCCATTA
CCAAATTAAAGTTGATAAATGGGAATAGCCTATGGCCCTTAATTTCAAGCCTAGGAAT
TAGGTAAAGGATATATTCTGGGAGATACCAACTCCTTAGGTAAAAATATTTACCAACC
TTTGGCACCCTAGGGATAAATTCCTATACCTAACTAAACGGGGGGAAATATATTTATCCC
10 AGGTGGAGGGGAACCTTTTCCCGGTTCCGGCAGGATAGGTACGGGGT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 587>:

GNMHY50TR gnm_587

15 CTGCGGAAGCCGTCCGCCTGAACCGCTGACACACGGCGCGTGGACGTAACCGTCGGCC
CCTTGGTCAACCTTTGGGGATTTCGGCCCGACAAATCCGTTACCCGTGAACCGTCGCGCG
AAACAGGAATTTGGTCAATAGTCACTTGCAGCGCGTTGGCGAAGTCACCGAATTGAGCTTC
CCAAATGGTCACTTTGTACGTGCGGAGCAAGCAAGCCGTACTCGAACGCCATCAGCGC
TTCTTCGTTCAAAATGGAGTCGATAACGAGGAAGTCCGCCATGCCTTCGCCCATAGGGC
CAGAGGAACATAAGTATCGTCGTCCCAATTTTCGCGGTTTGTATCGTGAACATC

20

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 588>:

GNMHY77TR gnm_588

25 CAATGCATTGGGCGCGGTGTGAATTACCAACGCTGCAAGCCGTGATTTCGTGTTGGA
CGACAGGCAATTTCGGCGTGATGATGAAAAACGGTTACAGCAGCGGTAAACCGTGAATGGAC
AAATACCTCTCGGTTTCGACATAAACATTCAATAATAAACAGATCACTAATAAAAAAA
ATAATGAAATATGAAGGATAATAGGAGGGTTAAGTTATTTAATGGGACTGTTCTCTAT
GAATCATAAGACACCAATAATCCATAGTACGTTTAGCATAATAAACTACCGATGCCATA
ACCTCTTTTCTCAGAACCTATTATCATTAGAATTTCTAAGTGGAAAAATAGAATAAAAA
ATTTTTCTTCGCTCTGTCGTTAATGTATCTTATGTTTTCCTAAAAAAATATAACA
30 TATATATACTGCACAAATTGGTAATAATAAATAAAGCGGAGGTAATTAATATGAT
AATGTAAATATATAATAACAACATACGAAGAAAAATATTATAGATGATTTCGTATA
CGAATAAAAAATATCCT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 589>:

GNMHY94TR gnm_589

35 GCGTGTGGGACGGCAAGCCTACGACGACAAACAGCAGTTCGCGACCGCGCGCAGGGTTC
AAACAGATTACGCGCGCGGCGAGGCTGTACGTTTCAGTACAGGTTTCTTTTCGACGCAA
AGGTTTGATTGATTGGAAGAAAGGTCCTCCGATTGCCGCAGCATCGTTTGTAGGCGCGGT
GGCCGGTGCAATTATCGGTGAGCTTGGTTTCCAAAGATATCTGCTGGCGGGTCGTGCCGT
40 TTTGTTGATATTTCGCACTGATTTTGTGTTTTCGCCCAAGCTCGACGGCAGTAAGGA
AGGCAAGCCAGAATGCTTTTTTTCTGTTTCGGGTGACGGTGCACCGCTTTTGGGTTT
TTACGACGGTGTGTTTCGGACCGGGTTCGGCTCGTTTTCCTGATTGCCTTA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 590>:

GNMIA39TR gnm_590

5 TACCTGCGCGCGTTTTTCGAGGCGGAAGGCAATGTGCGCGGCGGAGGTCATCGGTTTT
GTGGTTTCGACCGGGCGTTTCGACCGGGCCGACCTGCATTACGAGGCGCGCATCAACGGG
CAGCCCGTCAATCCTGTTTCGGTTCGATTGCCGACACCGGAATTGACGACGGCGGACAAG
GCGGCGTTTTCGCGCGCAGAAACAGAAGGCGGACGCGCTGCTTGC GCGCTTGGCGGCGATA
CCGGTTACCGTGTGCGCAATCGGATTGAAGTTTGAACCGCGCAGCAAAACAATGCCGCTCTG
10 ACGACGTGTATGGCATAGCTGACACGCTGAGCCTAAGTGATACCGGATACCGAGATTTTCA
TTTACATCTTTATAGCGGAGATCCACAGATTGGATACCCAAATTTTCAA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 591>:

GNMIA50TF gnm_591

15 CCGCAGGTTCTGGCAAAACCGAAAACTTCCAAGGCGGGCTCGTTGGGCAAAATCGGAA
ATGGAAACGGTATCAAAATTTGGGCATACCGCGCCAGCTGGCGGATGCTGCCGATGCGCGCC
GCTTAGAATAACCTGCTCGTAGCGGATTCCCGACAGCCTCAAAACCGGGGAATTGAGCGTAT
TCGGATGCCGAAAGCACGAAACGCTTGGGACTGAATGCCGACGCGGCCAAATGGGTCAAA
CAGCATTAT

20 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 592>:

GNMIB26TR gnm_592

CTCGGTACCTTCGTAATATTATGAGCTATGAATTCGACCTCGGTACCTGTGCACCTTTCA
AAGTATACAACCAAATAAATTAATAATAAGGCACCAATACAAATAAACCAACGCGTAAGC
25 ATGCTCATAGAACCTTGGTTTCGTCAAGTGAACACGCTTTGCCAATACCCGAAGGAATACCT
GAAGCAATACCTGCCGTAATGATTAAAGAAATACCGTTCCCGATACCCCTTTCAGTAATT
TGCTCCCCAAGCCACATAAGAAACATGGTTCCCGTTACCAAAGAAACTACCGTGGAAACA
TGAACCTCAAAATGAACCTTTTACAACAATTCCCTTGCTGAAATACGAAAGATGCAACACCT
AGACTTTGAAGAATTGCTAACAACACAGTACCATACCTAGTATATTTTCGTAAATACCTTT
CTACCGACCTTCCCTTCTTTATTTAAAGCCTTCARTGATGGCAAAATTTTCAGAGCGGAGC
30 TGTACATAATAGAAAGCTGAAATATATGGCATAATTCCTATTGCAATATATAAAGCGC
TCTAACGACCCACCGGAAACATATTCAATATTTCCAGGATGCCGTTTCCAGCGCTTTCG
TATAATTTAGCTAAAGCAACAGCATCAACTCCAGGTACGGGTATATGGGCACCAATTTCGA
AAAACAATC

35 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 593>:

GNMIE10TR gnm_593

AAAAAGTGGTTTCAGACTAAGAATGACGCAATCGGCATTTAGGCCGTCTGAAATCAGAAG
TACCGTTTCCCAATATCGAAAAATCCGCCATCGGGCTAAAAATACCTTCTCATGGAGCAG
40 AAATGACTCTTGTGAGCTTATTTAATCCGTTGCAAACTGCCGCGATGGAACAAGAGTTTG
ATGCCATTAAATCGGTATTGCTCTCCGATACCATCGCTCATGGTCTTATGGCGAAG
TCAAAAGACCTGAATCCATCAACTACCGTACGTTCAAACCTGAGCGTGACAGTTTGATCT
GTGCCAAAATCTTTGGCCCGGTCAAAGACT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 594>:

GNMIF19TF gnm_594

```

5  ACGCGCTGTTTCATGGTCTGCGCTTCAATGATTGTTTTGAAAGCCTGATTTTGACACCAT
   AACTTCATCGCGCTCAATTCTTAAACAGAACCGCCCCGATTAATACGGGTACGGAACCGCC
   GAGATAACAATAAGAATCCATCATTTCAAACCTTTTCAGCAGGGACACATAGTTAAACG
   GACGCGAGGATGCCGAATACTATCCAGCGCTGTTTCAAGACCGCTTTGCACGTTGTCCTTC
10  GGACTGCATTCGCGCAATAAAAGCCTTAGCGGCTGACGTCGACATCTTCCACAGGCTG
   CCGTTATATTCCGGCCTGACAATCTGCGCTTTCTTTGATTCTTGGTGACTACCAAGCT
   GAAATACAGGTTTTTCAGCGTGGTGCTCTCAAGACATTTATTTCCGACTTGTGTACAACAT
   GCGCTCTTACTTCACCACTCTCTTAAACGATGGGAACACAAAAAGC

```

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 595>:

GNMIF67TR gnm_595

```

15  AACTGTATACAAAACCTACAAATATTGTCAATATCGGCAATTCCCCCATCAAAATCGCGC
   AAATCAAAAATATAAAAGGGATGTCCGATGGGCATATCGCGTATTACTTGTTCAAATC
   CTAACCTTGAATTCAATTAAATCAATAGACTGAGAGAAATAAGCATTTAATTGCAAACTCT
   AAATCATCACTATCCCTCTTTATGATTTTCCACATAATTATCTTCCTTTGCGCTCAAAGC
20  CTCTTTTAGTTACCGCTTTATATCAAAATACCGCTCTGAAAGACAAATATCGTTTCAGA
   CGGCATTTTGACTGTTTAAAGCGGAGGAAGTTCTACAAACGGCAAGAAATGCTGAAATTT
   CTGAAACATTTCAAGATGATCTCTTAACGCTTTTACTGCTTTTCTTTTGAAATACGAG
   ATCATACACATCTATCCCGCTTAAAAACGCAATGTCGGTCAAGGTATTTTTTCGATT
   TGATAGTCTGCACATTGAAACAGAACCTACAGTATGTCAATATCGGTAAATCCCCCATC
   AAAATCCGCCAAATC

```

25

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 596>:

GNMIG49TR gnm_596

```

30  GGTCTTCGCGCTGGTTAACTCTAATAAGAGTCTCnCAAAATGCTCGGGCCTACCTAGTC
   AATCTAGTCACTCTCCGAGCCTCCGCGCTGCCAACCGTCGTGCAATCAGCAATACAAT
   ACTAAGCCCTCTGGGCTGCTATCTTAGCATTTCAAACCTCGCTGTTTTCAGGGGTACA
   TCCTTGTAAAGGAGGTTATTAGTGTCAAGTTCAAATGGGTGTTCTCTGTCAGCGGGGCC
   CTCTCTCCGAAACAACCTGGGCGGTAAACTTAAGGATTCAAGCCCTGGCCCTATGGGTCTTC
   ATCAAAGTCAGGAGTGCCGTCAAAATGAGTACCTGGGCTACTCT

```

35 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 597>:

gnm_597

```

40  CTACTAACCACAATCCCATCCTTCGCTCTATTGGGGTTCTATTCCAGGGTTATCTTCGA
   TTTCTCAGCGTAACCGCGCTTTAGCCAGACGTGGTCCGAAACGACCAGACCAAGCGGCTC
   CTCCGAAGTCGTTCTCTTCCCTCGCTTCAGCGGGCCAAAGCGTCTTAAACGGCCAGGGCA
   CGGCGGTGGGCGACCGGTGTAACACTCCTACGGCTTAGCTGGGCGTCTTATCGGCGACC
   AACTCTTAACCTACCTGCGTCACTAAGTTGCAGGCGGCTTTAGTATCTTCTGCATAGTCG
   CTTTAAACCTAATAAGATATCTCTCCGTACCGGCTCATCGTCAATCCTGGGCGGGG
   CAATGCTGTCTCGAAGCGCACTCTGCTATAAAAGTACATCCTTGGTCTAGTCGCGG

```

TAATATGGTCAGCCGTACTTTGGGTAGATGGGGTATCATAGTCTTCCGGGGGGGGCTTCT
 CTTCACACCTAGAGGGGGTATAAGCGCTCATCATCTAAGTACCGGAAGTCCCTACGGGTAC
 GGGCATCTCTCTTACAAACCGCTGCAGCATCCGGCTTCTGTTCTATAGATAAATGGTAG
 GGTCTGTAGCGGTACTTCCCTGGCACCACAGCTTCTTCGGCTCAACCGAAGCTTGGG
 5 TTTCAATTAAGATTATACCTCTCTGGTGGGCGTCTGCTATTCAAAGACTGTACGGTCTAT
 TAAAGACCCCTGGTCTCTGCTTGGGCC

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 598>:

GNMIG51TR gnm_598

10 TCCTGCTCATCCGTACCGGCACTTGCTTCTTTAACTCTCCGAGTCAAAACACTCTCTGGG
 CTTTCATCCCGCAGCGGCTTCGGCAGGGGTTTCGACGGCTGCTCTCGGCATCTCTCTAG
 GCATCCATCCACACTTGATTTCGTTCTTCAGGGCTCTCTCTAGGTACCTGCTTCCGAA
 GCGGGGCTCTCTCTCTCCCTACAAACCTTGGTAAGCTCTTTAACGTCGCAACCCACCTCC
 15 GAAGTTGCTTCTTCACTCCGCTAGGGCTTAGAGGCTTCTTCAACCTCGGCCTCAGCTTTA
 AAGTCTCGGAAGTTCTTTCAATCTCTTCTTCGTAACACCAGGTTCAAGTCTCGCTCG
 GGGCAAACTCTCGGGGTACCCAAAGCTCGTAAATTTAACTTGCTTTCTTCCCTAAGA
 TCTAGTCTCTCTGGGCTTC

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 599>:

GNMIG53TR gnm_599

AAGCAGCGGGCTTGCCGGTTAAACCGTGTAAGGTTAGGAAGAGCCGGGGCGTCGGTCTCT
 AAAAGCGCGCTGCGCAGGCAGATCAAAATCAACGGGTACTCAACTGAAAGCCTGAAAGG
 TCTCTATAGTGAAGATAGTAGACTGATCAGAATAAGTTCGAGAAAAAAGTCCGTACCGGG
 TATGGCGGTATCCAGAAGACCAAGAAACGACTCCGGCAGCAGGTCCGATGCCAATTCCG
 25 AGAAATTGGATTAGGGTCTGGTAAACATTCAGAGTCTCATGGGATCTCTACTATTCTTC
 ATTCTCGGGCTTGGGCTCGGCGTTCTTAAAGAAATGGGTAGTGTGGTGATGGTCTTAGT
 AAATAGGGTGAAGCGCC

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 600>:

gnm_600

TCATTGTACCTAGCTAACTGGCCTATGCCCTCGTCGGGGATAATCGTCGCATGCCCAA
 ATTTGCCCTCGGATTTAATTGGAAGTCTTGGCTACTATAGTTTTTGGGTCTTACTGCCTCGA
 AGACTCAACACCTTTCTATTCACTTTGGTTTAATACGGCTCTACTTGCAGGCTCAAG
 CCTCTTGCACTCCGAGGGGTGTGGACTAGTGCCTCCGAGGGTATATTCTAGAGCGC
 35 CTATGTGTACGATAAGTGCTGTGCAGCTCTAGACGGAACCTACTTTCTATGTTCTTAA
 TATTTCCTGCATCTCTTGCATCCCTGGCGTGCTGTTCTTAGTTCGGAATACATAACTGC
 GCATCTGCTGTCCCACTGTAGCGGTACACCGGGGATTTCGTAGTATTCAATCTCTCA
 CATCAAAACCTTGTGCGAGACTTGAGGGGGAGACCGGAAGCGTAGCAGAAAGAGCGGG
 TGGACATCGTACCGCCTATGGGGTCCCCAAGCGCTCTCCAAATTTGAGGGCGGGAGGGG
 40 GTGAAAGTAGTATAAGAGCGAGTTCTGTAGCACATAAGAATTTGcAGAAAGCTgGTAAg
 AAGAGGCAAAAACCAACGAGCAGAGTAATAGGGTTTCGCGTCTTTGAGGTTTGGGG
 GGCTCTTAGGGGCTTGGTTGCGGGGCTGATTTACAATCTGCCGCAACGAAACAGC
 TGCACAGTACGGCCGCTATCACGCCCGGATAGTCAATGCCAGTGTAACTCTCGAACA
 GTTGGCACACGGGGCTTTTCAACAATCGGGGTTAAGCAGCACTATGGGGAACGGTGCT
 45 GAGCGCTCTCCGAGGAGTTTCGAGGACTCTTCCCTAACACATAATGCTCCGTCTTCTAGAT
 ATGAGGTGTACAGCATGGCCGGCAGATGTATTACGTATACAAAACCTAGTGGATCCAGC

CTAGCAT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 601>:

GNMIG55TR gnm_601

- 5 TCGTTACTAACTTGGTCGTCGCTTACTCCTCTACGGGGGTTACTCAA¹AAAGTTAAAGCTA
CTCTCTATAGCTTCTGCGCGCTCCCTACTACCCGGGTCCAGATCGTTCTTAAAGTCTTCT
CGATTACGTACAGGGTCTTCTTACAGCCCTCCGAGGTTTGCTTCTTTAGGGCGAATTCCG
GTGCTTTTCATATTAGCATCAATAACCTCTACGGCGCTGCA²AAAGGC³CCAGGGTCCGCC
CAAACTCTCTTTCGGTCTTCGTCCTAGTTCTCATAACCGCAGCTTTCAAGTCAACTCCG
10 GCAGCTATAGGGTTACAGCTAAATCCCTGCGGGCTTGCTCTAAGCACTCTCTGCGTCC
AATACTTCG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 602>:

GNMIG56TR gnm_602

- 15 GGTGCGTTCATGGTAA¹AACTTCATAGAATCTAGAGGGGTTAAATGCAAGGGGGTTACTC
GGGTGGGAAGATCTGGCGCGTCCCTAGGGGTTTGGGGGGCGTCCGGGTAGTCTCCT
CAACGCTCAAGCTCGGTCTTTGCGAACTGCTCCTCCCTGCGAGATTCTCTTAATTCCTA
CCGACCGCTGGCCAAACCGAGCAGGGTGTCTGGGCTTGGTCTCGTCTCGGGCGCTTAGTT
20 AGGTCGGGACCGTTGTACAATTGGCCCAATATCTCCACACACTTACA²AACTGCAGCAGCA
ACCTAGACGCGGGTAGCCCGGTTTGAATCGAACGAGGGGGCTGTCTTAGGGGCGCTTCT
GGTGTCTCTA³ACTGTGGTGATCCAGGGGCTGCGCGACCGCCGCTAAGCCTCTGCACCGG
TAAACAGTGTCTGGCT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 603>:

GNMIG57TR gnm_603

- GCGGCGGCTTCGATAATATTACTCAATTCTTGGTCAGAA¹GCCGGGGCTTCGAGACCGCG
GCGGCTTCGCTACGGCTACGGCTGCTTCTTGGGGGGCAGTACCTTCCTCGCTTGCAAA
CGGTCCGATCCAAACCGACGCTAAGAGTCCAGCGATTGGGTCCAGTCCCTCCGAAACGCTC
TCAATCCCAACCATCTCCGTTCCGTAGCCTTTGGAITTCATGTTACTACGTTTATCTTCA
30 ATGGCTCGGTATCTTCATGCTATTCAAGCGTTGCACCTTCGTGCTACTATCGCCGATCTA
CCGSGCTCGGCTGTAGTTATCCCGAGGGTGCTACTACTACACTTCTTCGCTTCCGGATCA
GCCGCTCCAAACACAGCGGTTCCTAAGGGCAAGTCCGCGGGGATCCCGCAAAATCCATCT
GGCTGGTAGACCGCTTCATACCTATTATAGCCTACGAAGGTCTCA

35 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 604>:

GNMIG58TR gnm_604

- GTCCSATTTCCTGGGGGGCCSGGGGCTATTGCTCCAGGTCAAGATCGTACCCGAAAGTC
GCTTCGCCCTTAATTAGGGCCTCGGCCGAACGGSGGGGTGGTCTAGTAAAGATGGTCA
GAAAGGTTCTATTACGACAGGGGCTCGGGGGGTGTC¹CCCGTCCGGAITCTCTCACGGGTC
40 TTAGAAATGCTTTGGTCCTAGTCAATCGCGAGTATGGGTATATTTAACGGCTCCCTCAATA
CAGTTAGTATTAGGGGCTGGGTGGTACCTCTAATAAATTGCGAGTCACTCAATATCTACC
GTACGGCCGCTTTCAGCCTCTCCGCAAGTACTCTCTCTGATCCAAACAGTATCACTTCA
TCCATACATTGAAAGTATGGTCGTCTGCTTCATTGCGGTCTCCAGGGGCTCAATCCTGG

TGGTCAGCGACGGTCCTAGTCGTTACTTTCCGGCGCTCTTCTAAAG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 605>:

GNMIG59TR gnm_605

- 5 GTTAGTTCGGGCTTCAGGGTCCCAAGGGTTAAAGTCGCGCCTCGGCTCTTACGGGTAAT
GCTAAAGCTCTGCTCATTTCGAGTCGGGACTTCCTGCGGGTCTTAAGCTTCGGCAGCTGC
TTCAGAAGGGTCTCCCGAGGGGGAGGCACGGGCCTCGAGCGGTAAATGCTCTTAAT
ACCCGCTCCTCTATCCTGGTCACCGTCCGAGGGCTTTTCGCGTGGTGGTTATCATTTCGT
GTGAGAGCCCAATCAATACATTCTTTCGCGTGGTAAGCCGTACAATATCGTTCTCAGAT
10 ACTTTGGTCATTAAAGTGGGATTGCTTCGTCCCGACGGGTAATATGGCTACCATGGCG
CTCATTCGATTCCGTGCAGATACCGTCTCCTAAGTCCGGTGGTGATTCTTCTAGTCCGG
GCTCTTAATACCAAAAT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 606>:

GNMIG61TR gnm_606

- CGGTGGCTAATAGACCACCGACGCTCTCTCACCGACGTGAAACGGTCACCCCTCATGGT
GGTGGTCGTAAATCTCGGCTCGTTCATGCTCTTCTTCTCCTTAACCGGCGACTTCTTGGT
GGTCATCAGCAGGGGTCTTAGACTAGGTTCCCGCGCTCGACACTTACAACGTAGTCTCT
20 CACCAACACCTCGCGGTCCTGGGCGCAGCTTCCCGGTGCGCTTCCGGGGCTCCAGGG
GGGCTTGAGTAGCTTCGGCAGCAACCGCATGGCTTAATCGGCCCGAGCTTCTACAGCAA
CATCTCTAACC CGGAGTGAGCTTGGCTCCGCCCCAAGTAGCCTATCATACCTGCCCCG
AAGGGGT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 607>:

GNMIG62TR gnm_607

- CGAAGGCTTGGGCGATCAACATAAAACATCGAGGAAGACAATTGAGCCTGCTGATCTCTC
GGCATACGGTCAGGAGCTCTTGGAGCCTCAGCATACTACAGGTTTCAACGTAACAAG
CGAGCCAAACTTAAAGCGAGACCTGCCTATCGTTTCGGGGCCAAGGCCTAGAAACAACAT
30 GCAAGAAAGGACCGTGGGCCAGGCCAAGAGGGGCGGGGAAAGACGGCTATAGGGCAGG
CCAATCTCCACAGGC GCGCGTAAGAAACCGCAGCAGGGTACAAAGCCCCGCGAGGGG
TTTGGAGGTCTAAGGTAAAGATAAACAACAAAGCCAGCTTAAAACTGCCAACACAGGG
GAGTCGGCAACGTCAGCTTAAGTTTCATAA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 608>:

GNMIG63TR gnm_608

- GTTTTCTGCTTGGCTCTTCGAACATTCACGCTAACTTGTAGTTTATTCTCTCTGAGGAC
CAAAAAAGCTCAGCGTCAACTTTGCGSTCCATGGTTTGGTTGTCATTGTAGGGATTAACT
TCTTCAAAGTTATTCTTAAAGGGTAATTTCTCTCAAAGTTACTGGGTTATCTGCGGCGT
TAGTAAAAATTCCTCGGCGTTTCAACATGCTCTTGAGGCGTTCTAAGTCCTCTATTATAA
40 GATTAAAGTCCCTAAACACTACAGCAGCCAGCGCCAGCAAGTCGTCAAAAACCTTAAAG
TCTTAAAGTCTCTCTCTAACTTCCGGGGCGAGCCCTCTCCTCGCTCTCTTTGAAAT
TAAACATCGCCACATCCGGGTTCTAAGTAGTAAACTCTGTAAACCTTGCCCGAGCCAAAT
TGCTCTATCGGTCCGAGCTGTCAACAACGAGCTCCAAACA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 609>:

GNMIG64TR gnm_609

5 TAGGGAATACGAAAATTCCTCCGGTGAAAAATCCGGGGCTTCGAGGGGCTTGAAGCT
TCTTCAGCCTCCTCCTAAGCTCGGTCTTTTGGTCTCTCTTTAAGTCTTGCTTCTCTTG
TTATTAGTATCTCTATCATCCGGTCCGGTTTCAACTCTCTAATATCATATCTTTGGGCT
TGGTCACGGTGGGGTTATGGTCTTAATATCGTGGGTCACTGGTGTCTTAGGCTGCAT
TGGGGGCCAGCTCTATCGGAAGTAGTCGGGCTCCAGATCCTGCTTAAGTCTCTTAAATCC
10 GCCTCACCGTGGCCGGTACTCGGGCTACGCTTCTTAAATGGCTACTCTCCAAGAGAAGCT
TCGCTTCCGCGGCCGCGGGCTTAGATATAAAAGAGCCTTCTGCCTGGTCTTCTTCAGCA
CTTACTTCTCGGCCGGTACTGCGGTTAATATAGACTCGCTCTCATGGGCTCTCCTTACA
AAGTTATCTTTGC

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 610>:

GNMIG65TR gnm_610

GTCCATCCAAAAGGTGGTCTTGTTCTTTCTTACTAGTAGAGTCCGTACATTCGAGGGCA
GCCTGGTGCACCTAGAAATTGAGCTTGGCCTGCTTCCATCAATATCTCTGTACGCGTCCCA
GCAGCTCTTTGGGTACTTTCAAACAGCTTCAGAGGCTCCTCCGCGCGGCTCCTAGTA
20 GATCTATAGACCGCGGCTCTGCAACGGCTCTCATCGCTCCGTACTAATAAGGCTTTTA
TAGTCTTCAGCGTGGGCCGCTGCTTCTGCCAACACTTCTACCTAATCTTTAGTTCGTTCCG
TCCGAAGCTGGGTGGTCTTCTCACTAAATCCTAGTCTTACTCTTGCTGTTCTTCTAGTCA
TCTATACCGATCATATCTCTTTAGATGGTGCACTGCTGGCTCTCGTTAAGCGGGTCTCT
CTCTCGAAGGGTAAGT

25 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 611>:

GNMIG66TR gnm_611

AAGTTAAAAGTGGTAATAATTGSCCGGTGCTTAAAAGAGTTAATACGGGAAGTCTAATC
TATCCATATTCGTCTCTGTAGTAAATCTCCACTGTTCCAGGCCAACTTACATCGGTTG
TACCGGTTCTTATATTTTGGGTATCTACAGAGCTTAAGCTTGGGTAGCCCAACCACTCC
30 CTAATAATAGTGGTTCTTACTCATGGGAAGCGCTCCGAAAATTGGCCTTCTTCTCGCCT
GCATTACTAAAAACATTATGGGCGCTCCTCCGGTGGTTAATATGGGTAAATAATCGGGCC
TCTTGGCCATAGGTAGATGGGTTCTACAGCAAGTACA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 612>:

GNMIG67TR gnm_612

TTATACGCGAGATTCCGGGCTCTAAATGTGCGGCTCTACTCGCCAAAGCGGTCTGCCAG
GCTAATACCTTGGGCAACCCAGATACCTGATCGGTAACCAAGCTTTTAAAGTACCC
CTAGGCTTGGTGGGCGGAATCTTGCTAGTCACTCAACTCCGGGGCAATTTACGGCTCTC
CTATCCAGCCTCCTAATCGAGTTATTTCCCTTGCTATTAAGTATGATGATAGTAGAGGCA
40 CATAGTCGCGTAGTTGGGCTGGGGATACGAGTGTAAAGAAAAAATCAGATGGGGCGGG
TGGGGGGAGGGGCAACGATGCTCGGGGCAGCCGGGGAACAAAACTCTCGTCAACAGCTTA
GAGTGCTTCAGGTAGGTACAGTAAAGCGGGTACATCTTGTAAAGTCGGTCCG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 613>:

gnm_613

5 AATGTA AAAAATTCAGGTTTCTGCAAAATACCAAGTTCACGTGTACCCGGCACAAAAA
 TCGGGGGTTTCAGAAACGGGTTTCGATTTCATACATTGACAGGTTTCTTGCTCTCCCAAGCA
 TCAGAGGGTACGGGGCGCGGGGCGAGGGGGCGGGGGTCCCAAGCATCAGAAAGCATC
 AGAGAACAGGGGGGAGGGGAAGTTCTTAGAGGAGACGCCAGGAATAAAAATTACGATCCT
 CGGCTTGCTTGGACTGTAAACACAATCAGGTGTGAACCGCTGCAACTATTAACCGCAAGT
 10 CGGTTTCGATTGAGGGCTATGCGTGTCTCTGCTGCTTTGGCGTTGACGGGGCGGAAGTT
 ATGAGAAATCTATTTCCTTAAATACAGAAACCTATCCCTACTTTACAGGGCCAGGCATTGA
 GGGTTTTCATATTGTCTTCTnTACTGTGCGTCTTAACCTAACAGATCTTGCGCGATTG
 GCTTGCTCTCGTCGAACTT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 614>:

gnm_614

15 AAAATGGGCAGTGTGGGCTTCGGGATTATCAGCCTAGTCGTGGGGAAGGTCTACGATTG
 CGCAAACTCTTTGGCGCGCTCAGTCGAGGGCAAAACCGCTACTACTAGGGTCTTACCGCG
 TACCGTCGGCATCCTCATCATGGTCAGCGTCCGCTGGGGGTAAGGGCATCTAAGCTCAC
 CTCCTTCAGCTCCTTCAAATTCGGAAGTCTGATGGGAAGCTGTAGCAGAGAGATGTTA
 20 CGCCTCAATCAAGGGTAAGATTGCGAGGCGAGGTGCAAAAGAACGGATAGGTTATGAGGA
 TAGTGAATGATGGCTTCTGAGGGCAGAGACAGCAAGGGGATGCGGGCTATACAGGGTTA
 AAATGGGATAGTAAAGAGGCAAGGGAAAAAGGGGAAGCAGCAGGGGCGAGCGCTTAAT
 TGCTGGGCTCGAACGACTAAAGAGTTAAGAGGGGTAGGATTGGGGGCGTAAGAACGGG
 25 CACGGGAACATGGCTGCGAGAACATACAGAACTGCCAGCGGGGGCATGGAAGAAGAGG
 GTGCGCCAGAATGGGCTGCGGGGTTGACGGCGTGTAT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 615>:

GNMIG70TR gnm_615

30 GTCCGATTTTCCCCAAAACGACGGCCTCAGGGTCTACCTGGTCGTTAACGTGGGCGCTCA
 CGAGTAGTCTCTTTTTCGGCTTCACTCACCTGGTCAGCAGCGTCTCCTCTCTAGACGGG
 TCAGTACCTCGTTAGACTCTGGTGATGGTCGTACAGATCTGGCTCATCGCTTCAGCA
 CCAGCCTGGCCCTAAGGTCGTGCGGTCCTTGCCCTGCAATAAAGTTAGTCTTATTTAAG
 TCCTACCGCGTCGCTTGGTCTCAGCATTACCAGGGTACATCCTTTCTATTAGCGTCA
 35 GCTTCATTATCTTCAATATCTCCTCGGGCCTCCTCCTCATCAACCTCGGCTTTCCATTCC
 GCAGGGGAGTCATGGCCCCGACGCGGGTTTCGCTTCGACCTCACCTCCTAATTTCTGCTC
 TCTTCTTCATCCGCAACATGGGCGGATCTTCCTCATCGAGCTCCTCTAACGATCAGCG
 TCGGCTCGGTCTTGGGCGCGCTC

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 616>:

GNMIG71TR gnm_616

CCTGAAAGATGTAGTAGTCATTACAGCGCAATTACGATTGCGACCCAAACCTCAAAACAA
 TTTTCCACCCACGCAATAACAATTGCAAAATTGACGCTAGATAAATACGCCCACTCTTT
 GACCGCCGCGATGCTCGATTGGGCGAGAACCCGTAATCATGGATAGGTACGACTCACT

GGAAATTCAGACCCACCTCGACCCAAATTCAGTGGAGACCTCAGCACGGCTGCCCG
CGACATTTCAAATTCACGAGTGAGTTAGCCTTACCGGCAACCGCTTCGAATACCGATGC
CACCATTCAAATTTATCTAGCGGCTAAAAGCTCCCCAGCACTGCGCGAGACCCCGAAACC
TGAATAAATGTCCACAGACTGCCGGTGTTTTCAAA

5

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 617>:

GNMIG73TR gnm_617

GGGCGCTCCAGGTAAAGCAAATTTCCGGGGGTCATAGAGGGGGTGCAATTCGAGGAAC
TAGGCTTGAGTTTCTGGGCGCGAGACGCCAGGAATAAAAAGTACCATAAACCTCATCAAC
10 TTCTACATACGATCCTAACCTCACCTAATCTGCGATGCCGGGGCGGAAGTTATGAGAGA
TCTACCCACCTCCCTGCCGGGCGGGCTGCCTCCTCTCAGCGCTCCGGGCGCTGTG
CTCTCTTTGCATGCTTAATGCTTTTAATACTCGGAGCTCCTGGGCGGGAGATATCGCG
GGGCGCTTCTACGAGCCCGCGGTCCCTCCTAGCAGGTGAGGCGGCGAGTTTCGTTGTGCG
TAAGTGACGAGCGGCTCCGCGGTCTCCTACTTGCGGGCTTCCCTACATC

15

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 618>:

GNMIG74TF gnm_618

GGCTTGGGCTGATAGAGGGTGTGCAATGCGCGAGTGCTGCATAACAGGCTGGAATGCTG
TTGACAATGACGCGGAACCGTAAATATCCATAACCTCGGCAAGCGCAGCTTTTTCGCC
20 ATCATTTTCTGATGGATGCGGTACAGGTTTTTTCCCTGCCTTTGATTTTGGCCTCTATA
TTGCGGCTACGAGCCGCTGGCCGAATGCGCGCAAGACTTTGCCGACAACGTACTGCCGG
TTCCTCGGCTCTGTACATCGCTCTTTTAAAGTCTCGTAACGGATGGATGCAAGTTA
TGGA

25 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 619>:

GNMIG75TR gnm_619

TCCCTGGGCTATCGTACCTAGGCGAGGCTCCGCTGCAGGGGTCGGCAACAGAAAA
AATCTCTTAATCTTGCAATTTGGGTTTGGCGTACATCCTAGAGCTTCGTGCAACTGGGGG
30 CCACTAAATCTAAGCATTCTGTTTTAGAGGTTCTCTCCTTTTCGTAGCCTACATAGGCT
TCTTGGTTCTTGCAATCAACACAAAACTAATCTTGCTGTGAGTTTCTTCGACCTCCTAG
TAGTTGTGGTTCTCTAATGGTTAAAAATAGTCAATAATGTAAATATGTATTCTTCAAAG
TAAACTTTGCTCTATATTTCAATGTAGGAGTCTTCGTAGTATCAAACCTCTACCCGCTA
ATCGGGTAGTCAAATGGTATTCTTGTCTTCTAAGCAGATCTGTCTCACAGG

35 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 620>:

GNMIG76TR gnm_620

AAACTACTTAATTAGCAAAGTAGTCTGTACCTCAACCTGATATTACTAACTAAATGCG
TACTATCTACGTGAGGGTGTCAAAACTATGATTCTTCTGATTTGCGAAAACACCGAGAA
AAGTTCGGGTATTGTACTTTTCTCTTTGATCTCCCTGGGGGCGTACGGGTTTCATGGC
40 TCCACGCGAGCTTTCTTTACGTCTCTTAACTTCGAGGGGCGAGGGTTAATGTTCTTATA
GACTTATTAATGTACTCTCGCGGTTAATACTCGCCTTCGTGGCTTCGTGGGTCCTCCA
GGTCCCTCGATTCTCTCATTAGTAAGCTACTACTCCCGCTCTAGCATGCTTTGGGGTCA
ATAATTGGAAGGGTTCGACTTCAACCTCT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 621>:

GNMIG78TR gnm_621

5 GTCCGATTCCAAAGGGATTCTATCTTGCTTAGAATCCGCTCCGTCGCGATATTCATCAAC
TTAGCTTTCTATACCACTGCTGTGAGATACTTGAGTTTCGTCTACTCCCTCTATGCTTGG
AGGGTTATCCTCACTCGTTACATTTTCGCTTCCAAGAGCAAAGTATCCCTAAGTTGCTTA
CTAGGCAGGGGTTACCTCCTACCTAAAGGATCAGCAAAACGGGTAACTCGCGAGTACC
CGAAAAATCAAAGTTCTTTTCGTACCCGGGAATTCCTCTAATCATTTTAATCCTACCT
10 GCATTCTCGATTAGGTCTCTGGGGTTCGTAACTTGGGCCAAGATCCTATCTGGGAGA
TCTCTCGAGTCAATGAGCTTCTAATCCATCCTACTCTACCTCAAAGCCTACGGGACAA
TTTCAAATTCAGGATTGGAGGG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 622>:

GNMIG79TR gnm_622

15 TTTCTTGCCTTTGTCGTCGGCTTCTTCTTGCTATTAGTCGCAACTTTGTAATTGTAATT
GTCTGATGCCAGATGATGCATTCTTTGGGTCGTGCTTAATTTAATGATATTCCTATTA
AACTTCTCGTCTTACTAGTCTTCTAATTCGATGTCTCGAAGTCGTCTGTCTGTCT
GTTTGTAGGTATTTTCGTGCGTCAAATTAATGTCCAGCGCTAGTCTTACGATTATTT
20 GTGGGGTAGCATTCTATTGATAAAGATACGGGTGTTATTGGTGTAGGATTAGGTAAC
TTTGCAATTACTTGTGTTTGTCTACCGGCCCATCGAGATCTTCATAGCTTTCGATCTAGTA
GTCAATTAGGAGTCTCTAGTTTGGCTTGCCCTCTACGTAAGTATTCGCGCTTACATG
CCAAGATTGTATCTGTCAATCTA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 623>:

GNMIG80TR gnm_623

GGGTCTTAGTTCGGGGTTATTACGTGGTCCCAGTCTCATTAAACGGGGCTCCAGCCCT
ACTACTTTTGCTACGATCGTCGGGTAGTCAATATAAAAGTGGCGTCCGAGCGCTCCCT
ACCTGCGTCAACTCCTCTACAGACTCTACTATTATGGTATACCTCATAGTCTCTCCAGC
TGCAATTAATGCAACGTTAGAAGTCTATTCTAGGCCGGCGTGGTCGACCATAGGCTTCG
30 GSCATGGCCCTCTCGGTGGTTGTAGTCTCCCGGGCGACTCTGGTCGAATATTAGGCGCT
CCTAAGTCTGCTTACGGTTCTTAAGGTCGTTCTCGTTAAAGTAGTCATTCTGCTTAAT
AAGGTCGTGGCGTTAGTCATGTCACTACTCGGGTCTATTCTCGTCCAGATGGTTACT
AAGATGGTCTTCGTCGTGGTTCGGGCATTACAAGTTACATCAGAG

35 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 624>:

GNMIG81TR gnm_624

ATCCACCTCCCTCACTTCTGCCTCAGCCGGGGCTAAATGTCACTCTCGTCCCTCAGGGT
AGCTCCATCTACTTCGATGTTCAATTTCCCATCTGCTCTCTAGGCCGTTTCGCG
AGCTTTAAATTCACGGGCCCCGCTCTTGAACCTCATATAAAATTCCTTTAAACCGCGGTT
40 CCTTCCCTCTGAGCCGGGGGATCTTCGTCATCTCGTGGGTGCGAGCCAGGGCCCCAGG
ATTAAATACCGGAGACCTGGGTCTATTCAAGGGAGCGGTCTTGACAGGCCGGGCTCGTA
GTCTTTTCATTGATGCTAATCCCAAGAAATGGCCGTACGGGCTTCGTCCGCGACACCAATA
CCTCGGCTAGCACCGGGAAGCAACATAGCGGATTTGGCGCTCATCCACCATAGATCC

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 625>:

GNMIG83TR gnm_625

5 CCTCCTCTCCTCGGCGGGGCGTACTTACTTTATGGGCGTAGGGCTTAGGAACAACAGGCCA
ACAACTACTGGCTTCGTGTGGGCGGGCATTCCACTACGAATCAGAGGAGGATCATTACCT
CCCCCAATCGAGTCGGGTATACCTCTCGAACCGAGGCCAACACCTCCACTGGAGTACCTA
GGGCTTAAGCAACAATAAATCACTGCCACCGCTCGGTAAATGTCCTCGAGGGGGAT
CCGGCTCTTCGATTGCTGCTTCAATGCAGGCGGGTCGGCTCTTCGATGCTATTCAAAG
10 CTGGGCAGCGGGCAACACAAGGATATCTAGATGGGCATTACGCTCTGTAATCTCCCCA
TCGGCAGCTCAGGATCGGCTTCAATTCGGGTAACTTCCTAGGCGGATCAATTGTCG
CGAGCATCAATTCGGGGGTCGAGGCGTTTCAACCTAGGTAGGGCACC

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 626>:

GNMIG85TR gnm_626

15 CTGGGCGAGGTGCAAAAGATCATGCTATCCTCGGCCCACTGCCAGCGGCAATCTTTCAA
TAGACATACGCTTAACATCATTAGGAACTTCAGCTTCTTAAGATTATTTAACTTGTGCG
TAATTAGATCCGTACTACGCTCTTTCGTACGTTCTTAATAAGCTTCATTACTCGAGAAGC
TACACTTAAATTTGCAATAGAAATCATCCACTATAAATCTTCTCTTGGCTTCTTGG
GGGCGCTTTCATTATAAGATGCCAAATAAGTCCTAATACCCAGATAGATACCTCCGAAA
20 ATGTAACCTTAAATTAATCACAAAAATCTTAAACAGGCTCGGCATCGAGTTTAAACA
TACTGGCAATCCTGCGTCT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 627>:

GNMIG86TR gnm_627

25 AACAGAGAGGGTTACACACATCCTGGCTAAGTATACACCTAGGTCGGTTCGGGATAAGAG
CTCAGCATCGATGATTGCCGCTAAGAGGATGACTTAAAGGATTAAGCTGAAGAAGCTAT
GAGRATTACTACGGCAGAGAGGATAGGATCGGTACAGAGTGGGTAGGTGGGCTAC
AAATGAAGGACATAATTAGAGGTTAAAGGTCTGAATCTCCAGCACTCGCTCT

30 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 628>:

GNMIG87TR gnm_628

TCTTCTGGGTCTCCGAGGCCAACCGAAGGTGAGACCCGCTGCTTGGGCGTTCTCGAGG
TTCCAAGCGCCATATGGCCATCCCAACCGGATTCGGGTCTCTCCCTAATTGGCAGAT
TCTTGGTCCCTACTTTCGGTACCTCAGGTCGTAACTTGGGCATATGGCTCCGAAGTA
35 CTGCGGTGGGGTATGGGCGGCAGCAGATCTACCTGCGAGCTCGGGGTACTTACTTGG
GCCTCGGGGTCTCTATTACGATCTTATCCGTGGGTAAAGAGTCATTGTCTATTAGGGCT
CTCCGCAATAATTCCTTACCAACTAAGCAGAAATGAATCTTAATATTCTCTCGAATTGC
TTATCTCTCCGTGCACTACTTCGGGGGAAGCGTGGGGGTACAAGAGTCCGGGTTACTC
40 TCTGGGTCCGTCGGAATCCAGGAAGTTCTCTCCAGACTTAGGnCGSTTAGAAGTGTAG
TCTATCTCTGTCAGAT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 629>:

gum_629

GGGTCTTCGTCCGTAATATAGGCTTCGCTCCCGGCCGTCCTCTCACTACTAAAGTCTCT
 TCAGGGGCTTTCTGGGCACGGTCCCTACCGGGGTACGCTCGTAAACCTTATCTCCGAGG
 5 GCACAACCTTCTGGTCTTGGTCGCGGTTCATCGGGTCAGGGGCCCTGGCATCCAAATCA
 ACGCTGCTTTGGTCATAGCTATCGTCCTAGACTTCAGCGAGGTCCCTCTCACTCTCAATA
 AAAGCCTGGGGTGCTCCAGCGCTTCGTGCAAAACGGCAAGGGCTCTTCAACACCGGCA
 AAACAGACAAAAATCTCGGGGCTCAATTGCGCGTACTCTCAGAGGCCTCTCCGTACAG
 GTTACTGCGAGGTCTCCGGCACAACCTCGTACTCTCG

10 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 630>:

GNMIG90TR gum_630

TGGGTTTCAGATCTGGGCTCTTCGACTGGATCTTGGTCGGCTGCCTAACTCTTCGGCGAC
 CTCTATCTTTTACGGGGGAGTTAACTTGGGCATACCGTGGCCCTAGTTCATCCGGGGCCG
 CAGCAGTCTCTTCGGCCGTCTCTTCAGATTCCTACACCTCCAATTTCTCTTGGGGGGCGAT
 15 CCAATCATGGGAATTAACCTCCAGTCATAAGAAAGTGCTTGGCCGCGAAACACGGCG
 CTGCTCCAAGACCTCGGCTTATTGGCAGCGTCATACACGGGGCATTTAGTCTTCTCTAC
 TCGTACCAAGGCCATCGCTTCGGCTTCGTCTCAAAGTCAGCCACCTCTGGTGGGGAA
 CACGCTCTCTAGAGTCCGGCTCGCTGGGTCTGGGGGCGGCTACTC

20 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 631>:

GNMIG91TR gum_631

TGATCGGATTCTGTACCGCTTGTGAGTACCTCCAAGGCCCTGGCCGTCAATGTGGTAAAA
 AAGATCAGCGTTCGAGCTCTTGCGGTTATCCATCTCCTCCTACTCGACCGTCTCCTCCTC
 CTTTGGTGGATTAACTTAGGTGCTTTAATTCCTCCTACTCGCTCCATAAAGTTCTA
 25 GTATTCAATAAAGCTCAACGTAGGATTCTAAAGATCTTCAATTTCCCTAAGCTTTAATCTA
 ATGGCCAAATTGGCCGCTTCTCATGGCCAACTTACTAGTTGCTTCACAGAAAAACATT
 TGCAGCTTAAATGCAGCTACCTAGCGTCCATCGAGTCGGTAAAGATCTATTCTCAATGC

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 632>:

GNMIG92TR gum_632

GCTGGTTGCGGATGGTGGGGATTATGCAAATTAAGCGGTATTAGTTACGCTCATACAATG
 AGTACTAGGAAGCATCCGAATCAGCGGGCGGCGGAGGCTTGCTGGTGCGGCCCTCCCGG
 GGGAAATAACACAGAATTAATATTGATTTTAAAAACGCGAGTAGGCTAAATAGAAGCAGG
 GGCCTATAGGGAAGATGGTTGTTGCAGGGGTGCGGTTGACAAAGGCTCGAGGGGAACA
 35 TAAAGGTAGGAGAATACTAGTGGTAGTGGGCAACAAGAAAGGCAAAAGTACGGGGGTAAAC
 AAACAGTTGTGGTAAGGGTACAGATACTGATGGTCAGGGGGCCAGGGGCATAGTAAT
 ACTGCAGGTAAAAGGCTGCCAACAGAATGATGGCTACGCGGGTAGCTCTGGGGACACAA
 TGAAGTAACGTACTC

40 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 633>:

GNMIG94TR gum_633

GCTTCTTTGTAAGTACnATGGTTTCGGAAACCGGTAGCTTCTTCGGCACTAATACTCGCT

5 GCGTCCGCTCGGGCCCATCAGACGCTACCGGCACGCTCTTCGGCGAATCCGAGGTCCCTT
 CCTTCGAGATCCTCCTAGGGCTCAGAGCCTCCCGGGGGTGAGCCTGCTGGTAGGCGGG
 GCTGCGAATGTCTCTCCTGGGCTTCGGGCTCTCGGGTATTAAACGAGTTCTTCAACC
 GAAGTACCGTCCCTCCTAGGGGCTCTGGCCCTCATGGCGGTCTCTTTGCGGCTTCGG
 GCGGCTTCAGAAAGGCTTACTGCGGCACGGGGTAGAGGGAATCCAAAAAGGTCTCTC
 CCGGCTTCTCCCGGGCACGAGCAACGACGCTCCGTTTCATCCGGCTCCGCTCCCGGCAGC
 AGGTCGAAATCTCTTCGG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 634>:

10 **GNMIG95TR gnm_634**

TCAACTCCGGACAAAGCTACAGCTCCAGCTCCTAAGTACCCCCACGAGCGGGTAGTC
 GAGGTTGGGGTTGGGGCCGGCAAATCCGACAGTACATGGAGCTCCCAACCCCGGA
 ATTTGGTTAAAGTACCCTAATATAGACCTCCGCTGGGAGCGCGTCGAAATAGTAGGC
 15 GGTGGAGTCCGGGCGGAGTAGCTGGTCCATCCCTCCTCTCTCTCTTTTCAGCGGC
 TCTTCTCGCTTCCAATCTTCGAGCTTCGTGCAAACTTCGGTTGGGTACATCCTAGGCTCG
 TAGGGTAGTTTGGGGGCACTACCGTGGTAGAATTCTTCGAGGCCTAATAGGGCGAGAA
 TTGCTGGGGGGTACTGTGGCAACCTCCTGGTCTATCTTCGTTCTGCTCCTACGACAAC
 GGCATTCCTCGCTGGGCGTCCCTCTCCTGGTCG

20 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 635>:

GNMIH01TR gnm_635

AACCTCTAGGTACGTCCGACATTAACTCCAGGTCTGCAGGCCGCGAGTGTGAGGTGTA
 GGGCGCGGTAGGGCCGGGCGGTGAAGCAAGTAGAGCTACCCCTCCTCCGGGCGATAA
 GAGTGGTCCGCTGCTAGTAGTAAATTGCTCAGGCCAAAACGCTGCTTTCGTCTATG
 25 GGGGTACATCATTTGAAAATTCGGGTGAGGAAAAGACTCTAGGTTATGGGTACATCCTAG
 TTGGAGCGGGTTTCATTAAGTCTTT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 636>:

GNMIH02TR gnm_636

30 CCTACATCTCACGGCTTCAGGGCGGCGCTCAGCCTCAAACCGTGGGGTTAATAACTTC
 CGGGCGCGCTTGCTCCTTTGCTGCTGGGTTCTTGGTTGCTTCTAATGTAGGATCTTCGG
 GGCATCTACCTCCTAGGGAGTGCCTGGGCAACCTCGACAAAACCTGCTGCTATAACGGG
 TGCTATTATAGCATCTCTAGCTGTGGAAGCCTCCTAAGTCTAGTCTTAGCATGCGGGG
 CCGCATCCAAGTCGGCTTCGTAGTCGTAATGTCATCTGAGACCTAGCTGCTGCAGCTC
 35 TTCATTATAAATGGGGTCTCTACGGGCCCTTAAGC

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 637>:

GNMIH03TR gnm_637

40 TTAAAAAATTTCGCACTAAGTGAATTTAAACAAAGCTACCTCTCGCTGGGATTAGGG
 TTACTGGACCTCTAGTCTCTCTATACCTGGTATCTTAAGCGCAATCTGTTCAACGTC
 TTAGTGGCCCTCGCGCTAAAGTTTAAAGTAAATTCGGGCCAATCCTAAACACGGGCTT
 TCTCTGCAAGCCTTTGGCACTTGCCTTGGTCATTATTCGCGTAGTCATCCGCTCTCTC
 CGAGCTCTGGTATTCGAGGTGGCTCAACTGCGCAAAATGGTTCTTCTAGGATTGGAG

AAAAGAAATAGTTTGTGTAACGTGCAGAAAGCGGGCCAGGCTGGCACAGGCAGCACG
AAGCCGCGGAAAGGTAATTGGGAAAGGAAGATGGAGCCCAAGGGTGGAGAGACACCTA
GGACGGCTTAATAACAGCACTAAAAGAAGCCATACGGAAA

- 5 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 638>:

GNMIH05TR gnm_638

TTTCCGTCGAACGTAGCTTCTTCTTGCAATCGCTCAGCTATTAGAGCCAAATGCATAC
CTCGAGTCCGGGCCCTAGAGGCACAGGTCGAGTCATCGCTACTGGGGTCCTGGTAATGG
GATTCTTGTCTCGGGCTTCGTCTCCGGGGCCGTACTATAATCGGCGGGGGAAAAACAA
10 TTGCGGGCGGGGTCGAGCCGAAATCCTGGTCGTCTGCTTCATGGTCGATAAATATGCT
TGGTGGCCAAATATCACAGCTCCTCAAGTAAAAGCCAGCGTCTGCTGGGTTCCAAATG
CGGGTCCTTTGGTCTCTGTAAGCGGTGGGTAACGAGTTGCGGTCGTAATCTTGTCT
TCGTTAACTTCGTTAGGCGCGAGGCTCCGGTCTCCAG

- 15 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 639>:

GNMIH06TR gnm_639

GGCAAAGTAGCCGCTCTATTCGCCTGCTTCAAAATGCGGCTACTTCGGTCAGCTTCGTG
CAATCAGGCGTTCGAGCCGGGATACTTAGGTTACTATCTTCATCTCTGGTCACGTTTC
20 CCTCGCTCGATACCAAAATTAATCGCGTGCTCTCGTCTGCAGCCTCCTGGTGGTCATA
GCATCTCGCGCTCAGCCCTCGGGGGCA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 640>:

GNMIH07TR gnm_640

TCCGTTTCTGGCGGTAGCAAACTTTATCTGATCCGGGTGAGGTGTGTGCTGAACCG
25 GGGGCTTCGACCGTCCAGATCAAGAGTTCAATTGATAGGGTAAAGGGATAGTGTGGTTAAG
GGTCTAAATGGCGCGTAAATGTGGGTATCTTTGCGGGCTCAAAGGCAGCGTACGTCC
CTCCAGGTCTTGGAGTGCTCCTAGTCAGAAGTATCTTCGCTTCAAGGGCCTCGCCTCC
ATCGGGGCGTTAGATCCAAATTGCTCGACGGGGCCCTCGGGGCGACGTCGTCAGCAGG
GGAGTGGGCGAGCTCCTCGGGGCTCTCGGGGCTTCGAATGCTCGACCTACCTGGGGGG
30 ATCCATACCGACGCTAAGATGGTCCCGCCAGTGTGGTCATCAACTCCACATCAGCTTC
AAGCGCCGGGCGTTCGCTACTAGCTCGGCGGCTCTTAGCGCGAGCGACACTCGGGCTCC

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 641>:

GNMIH08TR gnm_641

ATCGCATCCCGGGAGTTAGGATTCTAGTAATTAGGTTAACCAAGGACTACATTCGTACA
35 ATATAGGAATCCTAGGCACAAGGGGTCCAAGTACCTAAATCTCG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 642>:

GNMIIH12TR gnm_642

AGCCAGCCAGGTCGTAGGTTTCTCTACCTCCCAAGTGACCGTGCGTACGCTCCAAATGGA
GTCACGAAAAATCCGGGTGCCACTAGGAGGTCGATGCCAGGTTTATGGGTCCGC

- 5 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 643>:

GNMIIH13TR gnm_643

GCTTCGGGATTCTCTTGAGGGACAACCTCCCTCCATAAAATCTTGCTTCTTCGGGTTCCAT
ATACTTTGCTCTCAAGATATTCTATGTGGGCTTCTTCTCTAGGCAAGGGGCTTCATCTCC
GTAATATGTCGCTCTTGTCTCTTCAATGCAGCTACGTTCTCGATTCTAACCTCGCCCTC
10 TAAGCTCCTCAGGTGCTCTGGCCAACAGCACTACCGAACTTAGGGCGCTTCAACTTC
ATTAACCTCAACGCCGCTCAACTTCGTAATGGTAATGTATTCCATAAAGTCGCAAGGTAC
CTAATCTTCTTCTCGTCCATCTCTTAGCCTGCTTCTAAACAACCTCCGCTTAAATCTC
TTTGCTTCTGCTTTCGCGTTCGATTGGTTTAGGCTACTTGCAAGAAATTCATCGTCATA
AATGGCTCAACTTTGCAAAATTCGGCAAAGTAACACTTCTTAAAGTTCTCGG

15

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 644>:

GNMIIH14TR gnm_644

CCGGCTACCAAAACCCGGGCAATTCGCTAGTTCTGGTCAGCGTGCGCAGCCGCGGGSTTG
GCAGGGGCGCGGCTAGGAGGCGCAGGAGTCGTTTGAGCTGCCGTCCTTACGGTAATA
20 AGGGCTTAGTCTCTTGCTTTTAAAGGAGTCCGGGGAGCTACAAATATCTGCTGCTTCGCGC
GCCAAAAAGATAAGTCTCCAGAGCGCAAAGTCAGTACCTAGTGAGGAGGCTCGCTGG
TACCTCTAGATCCACACGCGCACTAATCTCTGGAACCTCGCCGGGTTTCGGGGCAGCACCC
TACCCTCTAAGAGGCGTACTACGAGTCCTAATTGCTGCTGCTGGTTTGGCTGCTGGGAT
GAGGGTTGCTGCCAG

25

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 645>:

GNMIIH15TR gnm_645

CGCGGCTCTTAATGCTTCCATAGTCGGGCTTACCTCGCGGGGCGGATGAACATTAA
ACTTGCTTGCCTAGCGATTTCTCTTCTTCCAGGGCCAACCTGGGTACATCTTAGGCGGT
30 CAGTACTTACTTCTCTCACGGGCATTCAATTCGTCCTGCTCCAGACTCTCTTAGAGT
ACCGAGCTTCTGCTAATAACCGCTCTCTGGGGTGCTCTGCATCATCCCCGGGGGAACAA
ATGCTTCTATAGGCTTAACATATCGGACCAAGCAACCGGATGCGGCTCCAGGCTATATAT
GCTAGTCCAAATAGTGGGTCTTCGTCCATTTGCTTCTCTGTACGGTCCATAATCTCTCT
TCTTAAAGCTCTCGAATTTAAACGTCCTATAAAAGCTCGGGGGAAGCTAAAGATCAT

35

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 646>:

GNMIIH16TR gnm_646

GAGGTAGGTAAATTCCTCTAATATAGGGTTAGTATCTTGAGGGCACTTGCGTTGAGATT
CAGCTTCTGTCCCTAAACGTTCAATATCTCGTAAGATTCTCGAGGCGCTACCAAGGT
40 CCTAAATTTCTAGCTCCAAGCCCTCGAAATCTCAAAAGTAAACCGGGTATCTGCGTT
TGTATCTGCTTCTCTTAAACCTTTCTAATGCCAATCTAATATATCTCTCCCTAGTAAA
GGACCTGATTCGCGCAATTTCTTCAGAGCTTCAAAACCCGTCATCAGCTATTTCGCTC

TGCGTAAATTTGGGGTGCTTCTTC

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 647>:

GNMIH18TR gnm_647

- 5 AAGATCTTCATCTTTCAATAGTTCTCGGGCTCACTCCTACAGCCTCGGCCATAGGTAAT
TCAAGTACCTCTCCACGCTCCATGCATTCGTGTCATGCTTCAATATACAAATGATTCT
TAGTTCTTCTTTAGATTGATGTCTACCTCACCC

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 648>:

10 **GNMIH23TR gnm_648**

- TGATTGCAAAATTTCTGGCTTTAGGGTTGGCAGGCCAAAAAGTCCCTGGGGGTAAGCTCT
CCTTCCGAAAGAGAGTCGAAGCTACCGCTTCTTAAGTGGGAGTGCTTCTCGAGTTTAA
GGCTGCGCTTCATGACACGGGCTTTCAGAATTAGGGCTCCAGGCGTTGCAAAATAGCGT
TCTAAGTACTTTTAACAGAACTGCAGCCTTCCCGGAAAGGCTTACTGTAAGTCCGGCT
15 CTTAAGATTAGTTTTCTGTCTACATAAATGTAGGGTATTCGTCAACTTATCGATCCCGC
CGCGCTTCTCAGACTTACGGGCTGGCTCAGCGGACTCCCCGGGGCGGTTAGCGCTAG
CAATCCAGCGCGTAGACCTAAAGACTGCGGGATTACGGGCAAAACACGAGGGATAGTAC
TTCAGCTTCGTTAAAGGGGTAGATCGCATCGCTTGGTCTTAAACTGGTGGTACTCTCTCT
ACA

20

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 649>:

GNMIH25TR gnm_649

- TACCAGGAGGGTAATAGTACTGGAACCCAGCATAAGCCCATAGAGGGAGGTCCAAACTT
CGCAGGGTTCTTGGGTACATCCTGCCATCCTAAGCATGCATAATTGAAGATACAGACTA
25 ATCTTCAGAGGCATGCGGAGTCTCGGGGGCGGCTTCTGGATCCTAGTAGCACCAGATA
CAAAATCTTAAAACTCTCTGCAGTAGCCTTCAATCGAATAAGCTTCTTGGTAACAAGT
TAGATATAGACGAATCCCTGCCTAAAAATACATCCAGCTAGATGTCTTATTGAGATAGT
CCAGATTTCCATAACACAAACATTCCGAAGTATAGATACGAGGGAATTAATCTCT

30 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 650>:

GNMIH26TR gnm_650

- AAGGAGTGGTGGTACTTGCCGGGATGTCAGGAGTTAAGCACGAAGAAGTCTTCCAGGGG
TGTTGGGGGAAGAGACGAAAAGGTAGCAAAAGAGCCAGGGGTACCAAGAGCGTGGGGAG
TGGTAGAATCTTGTGAGGTACCAAGCTACAGCTAGGGGGGAATTTTCCAGCAAGACTA
35 AGTGGGTGTTTAGACGTGCGTGGAAATGATATCTAGTGGGGTCC

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 651>:

GNMIH27TR gnm_651

TTTCTTCCGGGCTCTCTCTGACTAAAGTAGCATTCTCAGCTGGGCCCAAGCTCCT

CCTGGCCAGCCCTCGTCCGGGGTGAATTGGCTCTCCGTACGCTCCAATCACGGTTGG
 ATTAAATTGAACACCAAAAGCCAGGATGTAGAAGCGACGTGGGTGGGTACATTGGAG
 CGTCGTGCAATCCCAATTTCAGACCATCCCAAGAGAGCCGAGGAATAAAAGTACCA
 5 TAACCTCTCTCACTTCTACATACGATACAGACGATCCAATTCAGGTATGCCCCTGGTACT
 ATTGGACACAAAGTCGGTGTGGGCACTGAACCTCACCTAATCTTCGATGCCGGGGCGGAA
 GTTATGAGAAATGCTTCTTGGCAGCGCTCCACTACCCAAGTGCGCGCTCCAGGAGCTT
 AGAAATCCGCGTTC

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 652>:

10 **GNMIH28TR gnm_652**

AAATTCTATAGGTAACTTATACAAAGGCTCCGGAAGTAAGTTCTAGTAGGTGTGGTTC
 TACAACAGAGTTCATAGTATTCCTAATAGTATTCTAATACATAATCTTAAACGAAAGGGC
 CCGGATAAAAACTCTCAGCACCGGGCTCGCTCTGTCCATGAGATTCCGGATCGGATTGCT
 AATAATACCTAATGGAGTTCAGAACCTGGGAAATACTGGGCCACTCATATACAGGAATCCT
 15 AAGCGCAAGTGCAATTACAAGCTCCTAGGCCGTGGCCCTAAACTGCTAGAGCCCCCTAA
 AGGTAACCCCTAACCAATACTTCGGGTACTTGAATTAAATAGACTAAAGCCTAGGGCAT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 653>:

GNMIH29TR gnm_653

20 CCCGCGGCGATCTGGGGTTCAACTCGGTACTTATCAACCTCCTGGCCGTCCTAATTTTGG
 TTCTCTTCAGAGGACTAATTGCTTTTCGCTTGCTCTCAATCTGGTTAAACCTTCGCAACCTTC
 GTGACAAAGGGGCGCGCGCTCCTCTACGGGGCCCTCCATCGGGGCAATAAAATTCGAT
 TCTACTAGGCCTGGGCTGCTTTCATAGCTCTCGGCTACAGCGATTATTAGTCCCAT
 CCCCTAACTGCCCTACTGGCTACCTCCAGGATCATCTCGCCCTCGCAAACTTCAAGCTC
 25 GCCAAGGGAGGATTATAGCCGCGTTCTTGATTCTCAGCTTCAGGGCCGAGGGCTTCGC
 TTCTCTCTGCATCAGGCTTCACGGC

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 654>:

GNMIH32TR gnm_654

30 GTCGTGCGAAATCCCTGAATCCTGCTTTACTCCTACGTTACAGCTTCAAAGTACTTGCCT
 CCTACCATCGTCGTCTCCAACTCCTAAACTGCTCTCCCATCCTTGGGCTGCTTTCAGAT
 CTTCCGAGTTCATCCTGTCAGCACGGGGCTGCTGCAAGTGCTCCTCCAACGGGGCTGG
 CGCTACTAAGTGCTTCTGCAGCTGGTCATCTGCGGGGCTACGGCTACTACTCGCAAGT
 CCCTCCTAGTACGGTAAAAAGTATCCCTCCGAGGGCAGGGGCTCTCTACTCACATAC
 35 CTTCCGCTTACGATCTCCTCCGCGCTCGCTCTAGCCCTGCTTTTCGAACCTCTCAACGT
 CAACGGGCTTGCTCTGCTCCTGTTCTGAGTACCTTCTGGGTAGATACTAGGGTAGA
 CTCGCTCAAAATCGAGGTGTTCAATTACGGGTTCCGGTCAATTTT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 655>:

40 **GNMIH35TR gnm_655**

GATTTAGCTCTTCGTTTTCTCTGTACCAAAGGTCACGAGTAATGCCCTCAAGGGTACTCT
 ATCCTCAGGTCTAGGGCAACGCTAATGGGTTTGAATACAAAACCTTACGAGCTCCGAC
 TAGATCTCTTGGGTTGCTAACAAACAGGCTTAGCATTATATCTAATGCATTTAACCTCAA

TCAGATTATAGTTAAGATTGCGTTTCTTATGCTATTCTGATTCAAAGTCTTAAACTACTGG
AATTCTTATAAACTATTAGTACTTCTCAAAGTACATCCATTCTATTAAACCCACTAA
GATACTCTTCAAAACCTTTACTCCTAAACTTACATGAGTAAATACTCGAACTCATATTT
GAGAAGTGTCAAGTCTACTGCAGGTACTATAGTCATTTTTGG

5

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 656>:

gnm_656

TAGGGCGAGTTCTCGGGAGTCCAGGGTGCGGGGGGTATGAGAAGACTTCCGGGCTTCGGC
TACCTCCGGGGAGCCAAACCTCCAGCAGCCGATCCTCGGGCAGAAGTCTTAGTACTCCC
10 CTCACTCCGGGTTAAGATCTTCGCAACCTGGGCCAATGGGGCTCTCTTAACAGCGCTCAA
ATCTATTGGCGCCGAGTCAAACCGCTCCACAGCCCTCTCTGCTGGTCCAAATCCTGGAGCTC
ACACATCACCGAGAGCTTGGCTCCATGGTGCCTAGTTCAGTCCTAAGAGTCCCTCGCT
AGGCTTACTCCGATCGGAAAATCCAGCCAGCTGCCGTCTTTTGGCGTCACTCCATC
15 TGGCTTGGTGTCTCTATCCTGGTCTCATAGTGTGCATCTCGCTCCTCCAGCGCGG
GGCAACCAAACCTCCTCGCCGTGCAGCGCTCTCAATCTTCTGCA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 657>:

GNM1H38TR gnm_657

ATTTCTGCGAATATTCGTACTGTCTTAAATCTTGGAGTCCCTCCATCTGGCTTCAGTGC
20 TAGTAAAGATCTATGATTGCTTGGATTGGGTCTCTATAAGTAATCTCGGAGTCAATGC
TAGATCTCTACCCCCGCAAAATCTTGGTCAACGCGTCTCCAAAGTTGTAAAATTTGG
AAGTCTCTCTTCAACAATTTGCCCTCCTCAGGGCGCTCTCGCCACAGGATCTGTTTT
CTTGAGGGTCATCAGCTTTAATCTTACCTTATTAACAGCTTCTCTCGTGCCTCCCGGGC
AATCGAGGCTCTTGTCTGAATCAATTTATCTCTTCTTAAGTCTTGATCCCTGCCATAAT
25 CTTGTCCAACCTATCGGGCGTCGGATCATGGAACCCCTC

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 658>:

GNM1H42TR gnm_658

TGCTTGGGCGGGCTGTTCTTATGGCCCTGGGCTTCGTAAACTCGCGCCGCGCCGCTCG
30 TCAGGGCGGGCGTTAAGTTCGTAGTACTTCCGTAAAAGCCCTAAGTACGGCGGGCATCT
GGTTCATGGCTCGGCTAGCAATTGAAGTACATCCGGGGGTGTCCTACGTTCTAGAGTTA
TTACGGCGGCTCCTCCGAATTAGACTGGTAAATAGTGGTGTATGGTCCGCGCCTCAGC
GCCGACCTAGCCGGGCTGAATTGGTGGTGCACGTAGTAGTGGCTCAA

35 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 659>:

gnm_659

AAAATGCGGTAATGGTGGTGGTGCCATGGTGGCGGTGGTGGTCATTAAATCGTTGCATC
ACAAGGGGATGGATATTAATAATGCCATTCTGATCAATTGGGCAGTAATAATCGATTACA
10 TTATGACAAAATAGAGAGCGCGTAGGTATTACTCGCGGTGGTGGTGCAGCCCTAGTCCG
GGCTGCAGCGCCCGGAGGTTGGTTGCATTAAATATACCAACGCCAACGCTTCGTGCAA
CATTTACAGGTTAAAAGTTAATGCATTTTGGTCTAAAAACTAGGCCCTAAAAGATCGTGGT
TGCATCCGCTTTTGGGGGCGCGATAACGAGGCTGCCCTCCATGCATTCCTATGATATT
CGT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 660>:

GNMIH46TR gnm_660

5 TGGGTTCGCCAAGGCTTCACTGCTGGCTTGAGAGCTACAATCAATGCTGCAGCTAGAGCA
GCAAAACACCAACAGCTGCGGGTTGAGCAGGAAGTACCGCGCTCCATCTCCGCTCCTCA
GCTTTAGTCTCGCAGCAGTATCAATATCAACATATCATTCTCTAGTCTATCCTGTGA
AACACTGCATTCAAGGGTTAATTCTTACAACCCCTGGCTCCAACCTGCCATCTCCTGGG
ATCTCTGCTCACAACAGCCGCCACCGAGGCAATCATTATAGGTAGGGCCAAAATCAGAG
10 GGGCGGGCTTTCTCGATGTCAGGTGGAAACCCAGACCACGTCAGAGGGTTAGCTTCGTGC
AAAGATCCGGGGTTGGGTACATCTAGGGTTCGCGGGTACTTTACTAAGGTCCCTCCAA
GCTCTAGATCCCAAGTCCCGGCGAGGGGGCTGCTAGCCTCTCCGCA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 661>:

gnm_661

15 CAGGAACGCACTTGTATAAAAAATCTCAACAACTCCATCAGGAGATCAAAGTAACAA
CAAAAAATGCATTTAACCTCATCAAGGCTAATTTCCTCGATAAAAAAGCCGCAACGGGG
GAGCTTTAGTAAATCTTCGTGCTAACTTCTCATAAAAGCCTCCCTTCTTATCCGAATAA
ACCTCGCCGAGTCTCTAGGTGCTTACGCCAACATAGCTTGGATAGCCTCCATCTTCTGTT
20 CCGACATAGTCGATGCAATTTAGGCCCTCGATTGGTTTCGAGCAATAGTCGTCACAGGG
CCACCGTATGGCCGGCCCTACTAAAACCGAGTCTCTACTCGAGTCATTTCGAGGTGCA
ACACTAATCTAACTACCTCAGGCTCTCAGGTGGCAATACATGTGATAATCTTACTCC
GAACAA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 662>:

gnm_662

25 GCGTCACCTTAGGCGAGTTACGGTCTTAACGACCTGGGAATTGGCTCACTACCTGTG
GCGTCGCTCCATCCGGGGTCTGCTACTTACAATATCTACCTCGCGGCTGTACATCCCTCT
CCGGCATCCTTAACGGCGATTACGTGGGAATTCCACTCGTGGGCGGGCCTATAGATCTT
ACAGCGCTTCTCTGGTAATCGTCGCTGCTAGGACCATGGGGTTGGCTCTAGTAAGCATGG
30 CCATGGCCTTCGTCTGGTCAAGGTAAACCGGGCGGGCTCACTTCGAGGTGGTCTTCT
TGGCTCTTAGTACGTTTCATCGGCCCTATACGATTAGCGGGCTCCCGTAAGCTCTTCG
CGGTCTCCTACAACTCAGCGGCTGGCCGAATCTTCTAGACTGCTGCTGCCAAGTA
TCCTGGGCGCGTGGCTCTGGGCTTCGGGGGGG

35 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 663>:

GNMIH50TR gnm_663

35 GCAAAAATTGGTAATAAACTCCTCCAAATAGAGGGGGCCAGCTTCTGGATTTTTTGCGC
CCTTACTACTTCTTATCCGGCTATCTCGGGTCTCTACTACGTTTGTCTGGCTCAACG
CGGGCTCTTAGTCTCTCTCTCTACCGATCCATAAATTCGTTAGCGCAAGAGCTTCT
40 CTCTCCATCAGCTTAAAAGTTGCTGCCCTAACCTAATTCGTTGCTTCAACATAATCCTAA
TCTTCGCGGAAGCCGACGCATCATAGTATTGGGGCAGATATCTCTAAAAACAACCTTCT
CGCCCTCAACGCCCTCAACTCTGCTATATCAAAGTTCTAAGTCTGTATCTTTAGTTA
CTGGGTTCTTCAATCTGCTCGCCAAAGGCCCTCCCAACTGC

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 664>:

GNMIH51TR gnm_664

5 GTTCTAAATTATGTGTTAATTGTATAAAATTTGGGAAAAGTTCTGAGAAAGTCTTTCTAAAGG
CAGGGAACCTAGGTGGATGGCAAAAGCCTATAAAAAAGTTAAGTTCGTAACCTAGCAATCA
TTGGTGCTTGGCTAACTAAAAACAGGGTAAATGCATCCTGCTCGGGGCTACCTCGGGCA
ACAGATCCGTCCTTCTGCCATATCTCTGGATCCGAGTACTAAAGTTCGATCTTCAGGCG
TCACTAAATTCCGGGCGGGCGTTCTGTAGTCTCTACCAAATTCAGCGCCGTCTCAACCA
AAGCGATATTGGTGTTCAAGTAAATCAGGTGGGCACGGGCACTGGCTCGTTGCCAACCGAT
10 CCTGGTTGCTTGTCTCGCTCCGCCGTCAATATAATTGGTGGGATAAGACTTTCTAAAACTG
CGCGGAGAGCCCTT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 665>:

GNMIH52TR gnm_665

15 AATGTGGCTGAGGCTAGCTGCTAGGCTATACGGGCAGGGCATACTGGCGACAAAGTAAGG
TTCAGGAGGATTAAATAAGTCAGGCACAAAAGAAAAAGAGGGATTGCAACTGCACAGTAC
GGGGCCCTAGTTACCGGAGCGAGGAGGCAAGAATGGAAAAAGAGACACAAGGGAATTAG
CTAAGGTGTTGATGTAGCCTGCAAAATTTAACTTCAGATTCAATGGGTGTTCAGAACTG
CCAATAGTGCAGGAATCAGCGTTCTGTGGCAACGCCAACCTGCAAAATGTTCTCTTGCT
20 CGGACTCCCTCGCCGAGGCTTCAACGCAAAAGTTCGGCAAAAATAGTTCAGCTACATTC
GGGCARTCGG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 666>:

GNMIH53TR gnm_666

25 GCTTTGTTGTCAACTTCATTATGCTATTTAGTACTGCTGGCTTCAGATAGAGGCGCTA
TGGGTCTTACAGATCTCCTTAGACGTTCTATTTCACAGACAATGCAGCCGGTCCAGCAAAA
GATTAACGGAACAGAGGTGCTTACGACAATATTGTCTGTGTTCAAAACATGTGCTGTTT
GTAAAGTTTCTCAATCCGGCACTCTGCTTCAGGCAATAGGGAGTGGCCCTAATTAATCT
30 CGGGCGGTTAGGCACTGGCAAGCCTCCGGCTCGACAAAAATGTCGCGGGCTTGAAAGA
AAGCCCTCCTGCTCGTTAAATGCTACGAAGCAGGGGTAGATCACAGCGATTGCCAACA
AGAGTCTTCTCGGGTGGATCCGCTACCTAGTAGGGCTCTAGCTTCGTTTCTCGGGC
GAACATAATGGCTTCGT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 667>:

GNMIH54TR gnm_667

35 GTCCGATTTTCGCGAGTCCGGTTCGATGAGTGCATGCGTGCTCCTGGTCGTCTTGGCGTT
GCAGGGGGCGGAAGTTATGAGATGATTGGTATAGGGTGGAAAGAAAGGGAGCACGAATTA
GATGGTGCGGCTCGTTAAAGATCCGGGTGTTGGCTGCTCCTACCGGTCCTTAGTCCGGG
CCCTCTCAGGGCCAAAGGGTTGGAGATCCTACCTATTAATCCTCCTCTCCGCGGGGGTTG
40 TCGCGGGGCGAGGGGATGAGTGGCCGCTCTTGATTTCGCTACTGGCTTCAGGGGGAGTA
TCCCTCTATCCCTCCGAAAAAGCTTCGTCAGGTTGGTACCCGGTGCTCGTTCCCTATCTA
AGCCTGGGCCCGTCCCTCGAGCCCTCGGCTTCTGTGCTGGGAGGGGCTCGCTCGGGGATAC
TCGCCGTCTCCAGCCCGAGGAAGGAGCGTCGTTATACGGGGATCC

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 668>:

GNMIH55TR gnm_668

AGGGCAAGGGTTTGACGGAGTGACCATACTTTTGAGGTGGGAATGAAGGGTGAAGTGGCA
AAGGAGCACATTAGAGCTGATGATTAGGGAGTAATGGGGAGGGCGGGAGGCCACGCG
GGGGATGAGCAATTGACGCAATTGCGGAAGCAATAAATTACGGGTAATAGCTTCACTT
AAGCATACGAGGCAATAGATCCGGATAGGGCAGGGGTACCCATTATAAAGCCGGAGTTT
TGAGCCTGAGTGGCTATCCGAGATCTAACATAAGCTTATAAAGCCTGGGTTTCATATCTT
ACCCCTACCAGCTGG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 669>:

GNMIH56TR gnm_669

TTTTGTGTTTGGCCCCGACACCTCCTAAATCTACCGGGCTGGCCCTCCTAGGGGTAATC
GCTACCTGCTGGGGTCAGGGGGGCTACTGGTCCGGGGACTGGTCTACAAATGTGCTGGGT
GGTCAAACTGT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 670>:

GNMIH58TR gnm_670

AAAACCTTGGCGAAATCTTGCGGGGCATTGGTGCATCTAATCCAGTCATCAGAGCTC
TTATCAAAAACCGGTGCTTCGTAGTGGTTATCGGCAGGGTAAGGCTTCGGTTCTACTCG
GGCATTTCGCTAGTGTCTCTTTCTCTTAAATGGTAGAGAAGTCCCAAGTCTTCTTGGA
GACTGCATCTTCTCAGCATGGTCTTTCGTTCAAGTCAGGGTTGCTCGGCAACTCGAAATTT
AAATTGGCATTTCGCGTCTGCTGTTGCTCGTGTAGTGGCTCAGGGGTGCTCGAGAAATGGGC
GTAGCCCGGGATGTTGCTTGCAGAGAAAGCCTAGCTGCAAGGGAAACTTTGGGGGTAACT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 671>:

GNMIH59TR gnm_671

CGCGTCGTGCAAAACCTCCGTGGGGCCTCCGTAGGCTGGGTAGGTCGGCCAAACAGTCT
AGGCGCAACTACGGGCGTAAAAAGAGGTCTAATATCTCTTTGCTTCTCTGCCCTCCTC
CGTACCCAACCTCCAGGGCTTCTACTGCTTTTGCAAAAGTCGCCCTACCTAGGAAACTC
CCGACCTCCAAAGGCTTCTTAAGTTCACCCCTCACAAAGCTCCGGGGCTCGCGCCTCCAC
TCCATGCTTCGGTTCAGATTCCAATAAGTATACACAAAATCGTGCAAGCCTAAGCAATA
AAGGCAAGGCTGGTGTGCTGGCTCCGCGCTCGGGTTCTGGGGGTTCGGCGCAGCTACT
AAAATTACGATACCTGTAAGGGTATACTGGGCCAGAACCTCAAAAATACCAAGTCTTG
G

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 672>:

GNMIH60TR gnm_672

TGCGAGGCGTCTTCGGGCTTCGCTTGGGCCTACTCCGCGGTCCCTGCTGCCGTCCAACGG
GTGGAAAGCGTCGTAGGGATTCTCGCTTCGTAGCAGCCAATCTCTGCCATCCGAGGGC

TTAAACAAGAGGGAAATTGCTTCTGCATTCAACACCAAACTTCGATTGGTAATTGCAGCA
 AATTCCAGGTTTCTGCGTTTAAAGCTTCTCGCTTCAGATCTCTCGCCTACAATAGTTTCA
 GGGCTACTGATTGCTGTGCTCTCCTAAAGCTCTGGTTGCTTAAATTAAGTACTAGAT
 CGGAGTTTGGAACTCACTGCTGCATTCTCGAGGCGGTCCCTGCCGCTTTGGCTAAGATC
 5 CTGCGGTGGCCAGGATCTGCCCTCCAGGCCGATGCATTCTCGGGTGCAGGGTTTGCATTG
 GGAGTCAGCTCCATATTTAAGATTGCTTTCA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 673>:

GNM1H62TR gnm_673

10 CCTTAAAGTCTTCCGATAAGCTCCTACTGGTCTCTAAAGTCTCTACATCCTTAAGCTTTC
 TAAACAGGCTCCTTGGGGCTTGGGCTCTACGCACGGTTATGGGCGTGGGCAACTCCTCGCG
 CTACAGGCGCTCTGCTGAAAAAGAAAGTTTATAGGGGCTCCGGCGATTCTGTCGGGGCC
 GAGACTTCTGGCTGCACCTTAAACGCGGATTTCGATTACAGGGGGAGGGATAGTGGGAG
 ACCTCACAAGTAAACAGGCCAGATTAAAGTGGTAACCCGATCTAAGGTAGGACTGGCCCC
 15 AAAGCTTCTGTGCAGGCACAGTTGCTTAGATATCTACCCGGGCCAAGCTCCTCGTGCTTC
 TCGGCAGCAGCGCGCTCTTCGGGCAAGTTAAGTCTTAACTTCTCGACTTCGCGGGCC
 TAAACAATTGTGCTTAGGGCCGCGGCGTCTT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 674>:

20 GNM1H63TR gnm_674

TATTTAGAACCCGAGAGCGGGCCAAAAAGCAGGTGAAATGGGACCTCGCTTCATACGAA
 ACGTGGGCAGGGTACAACGTACAGAGACTCCGAAGGCGCTTAGGCCCGAATCTGTGTGGG
 ACGCAAGGGGAGAGGAAGGGGACAGGTTAGACGGTATGAAAAAGTTATTAATTATGACT
 TAGAAGGAACGGACGAGGTTGAAAAATAATCCGGGGAGTTGCTTGGGGGCGAGGCTCTGG
 25 CTGGCTCGTCGGAACTTAACCTCTACTTAGGCAGCAAGGAAGAACAAACAGTCAGGGTA
 ATCAAGAAAGGTATACCGTGGGGCCGAGAAAGTAAACAGGAAGAAAAAGCCTAATATTA
 AGAAAAACGATACTA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 675>:

30 GNM1H64TR gnm_675

AAGATCATAGTCTTTAGAACAGGTCCGAGTCAAATTTCTTCTAAGGGCCAGCAAGATAA
 ACGGCTTAAGATGTACCAAGTGGGCGGCAAAAGCAAGCACCGCTGCCAACCACACCAACC
 CCGTCTCTCTCAGAGTCGAGGCTGTAATATTCATCTTCTTTGCGAGCTTCCAAAGAGGCTCT
 GCTGGTCTGGGTACATCCTAGAGTGCTTCTATCCCAACTTAGTCAGGTACCTACCCCTTAA
 35 AGTCAAAAAACACACGCGGCTCGGGGTAAATATAATAACAGCTTAGGGGTGGCCCAA
 CAGCCACTGCCCGCAGCTTCTTAGCAGGAGCAATGGGGCGCTTAAATAGAACTATGG
 TATCAACACA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 676>:

40 GNM1H65TR gnm_676

GCCTCTTAGATTCTTGCTACCGTGCTTCGTTATCCATCTTCTTAAAGAAGAGCCACATT
 AAAGTCAGCGGCTTCAGGGTGGGATCGCCTCCAGAGTTCGTCTGGGCTGGTACGTGTG
 AGAATCCTTGTAGTCGTAACAACTGGTAAGCGTGGGATTCTTGTTCGTGGTACCTCTG

5 GTTGGTTCTAGAGATCTTCGAGACGGGGCGAAGGGGTCGGAGACTTCGGGTGGGGTGC
TTAGATACGGTCCCAAACGAGCTGCTTCATCCAGGTCCTGCGCTCATCAGATTGATT
CTGATTTCTCGTTCGAGACTTGCTGGTAAGGCTACCGGGCACCGCAGTAAAGGTGGC
GAGCTCGTAGGGCCCGGGCCAAACGTGTTCCGAGCTACAGGTCCCCCCCCCTAGGGCAGG
GGCTAGTTTGGTGGCAATTCTAATCGTAGTTTCATTCCATACACTAGCTGGTGC

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 677>:

GNMIH66TR gnm_677

10 GGGGATATATGTAGCAAGGTAGTAAAGCCAAGTGGCGAGCCGTGAAGAGTGAAGTTAGTA
AGAAATAAAGAGCAGGAGTGGGACTGGGAATGCACAGAACTAGTGGGAAAGGGGTGG
GTAAGAAAAATTGAAGGGCTGGCCAAGGGATGGGTGCGAAAACGGAGGGCGGCCAGGTT
GTGGTATTGACGGGAATAAAGGGGTTAAAGTAGGGTTCCTACTGGTGGGGCAAGGGGTG
AGGAAACGGAGGCTGGCGATAAGGGTTCAGTAAACTCTTAGAAGAAAGAGGTAGGGAGA
15 CTGTAGTGAACCTGGCAAGGGGAGGAAAGGCAACAGAGAGGTTCCGGGTGGGATAG
ATCAGGGCAGGCGAGATAATACAGAGAAAAGCATGGGTTAAAGATGCGAAAAGTGCAA
ATACGGAACGCGTGGCTGGTGGGACT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 678>:

GNMIH67TR gnm_678

20 AAATCTGAGTCTCAATAAGTCAATAGGTACATTGGTGTCTTGTCTACCTGAGCGTGGGT
GGAAACCAATGTCACTCCCTGGAAAGCCGGAGATTGAGGCCACATCAAGACATCTAG
TAACCTAGTCCAGAGCGCTCGTGCAACTTCAGGGGTGGATGTAATATTAGTAGTATCA
TTCAAGCAAAATTAAAGGATAACCAAGTAGGATCAGCTAAGATACTATATGCCTACCATAAA
25 TTCATAATGTGTTTTCGGGTTAAGAAGGGTCCCGGGGCTCTTGCTTCTGGAAGGGGAGCT
TCGAGCAACGTTAGCTTCAGGCCCGGAGGATTCCTCGCTTGAGCAGAGCCTCCGGGTAC
CCTCGGTTCTCTCTCGGGTCCGTGCAACTT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 679>:

GNMIH72TR gnm_679

30 GAATCGAGGACTACCGAACTTTTGGGTTTTGCTTCTCTACTCATTTTCAGTCACTTCAGG
CGCTGGTTGCTTCTCATTAGAGAATTTGGCTTCATCCAAAGGGCTGTGAATTCCTAGAC
AGCTCGAGCGACGGTGTCTTCACAGTCATTATGATTATGGGCTTCGACTTCGTTAATGTC
GTTCTAGACTGGATTTCGGTTTCTCTAAGCTGGGTAATTTCGGCTTCGCTACGGCAAGAC
35 AATATCTTGGGTTAAAGAGTCTTCTCTGTTCCGGTGCTTTCAAAAGCTTCGCTCTATA
TTCGTAATTCGGGGGGTAAATCGTGGTGAAGTCTGCTGCTGCAAAATTCGTCCTA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 680>:

GNMIH73TR gnm_680

40 ATTCGGGCTTCTTCAGGGGATTCAGGGTGTGGTGGGGGGCGCCAAAGATGCGTTCTGC
CGACCTGGTCCCTGCAGCAAAAATTCTTCTGTAACTTTAACTCCAACTACTTCTTCAA
CTAGCCGGGGCAAGAGTGGGAGCTTACAGGGTCTGGCGGGTACTACCGGGGGCAGGGC
GTCTAGTGCAAAATACTCCTCTTCATTAAAGTTCGGGGGCTTCGGGATCTCAAGTTCA
GACTTCGTGTTGTGCTAAACAGATTCTGGGCTGTGGGCATCAGCTAGAAGTCTACTGC

TGGGGTCACTCCGGAGACTGCTTATTCATATGAAACTTCGACTTGATTCGAATGGcNCTC
CAAATAGGGGTTCGGGCTTGGGAAATATC

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 681>:

5 **GNMIH74TR gnm_681**

CTCTTTCCGATTGCCTTCAGTCCGAGCCCTAAAAATGGTAACCTCGCGATTATAGTTGC
AATCAGCAAAGGAGTGTGGGCAACTGCCCTCCTCAATCTTGCTTCTATCACGGTCATAGT
AGTAAACCTAGTCAGAAGTTGCAAGGCCAATAATCTGGGTCGGCCAAAGTTACTACGGC
TCTCATCAAAGTCAAGGCCGCTACCTCTGGTTAATCACGGGAAGTGTATCAAGGTTGT
10 CTCTCTCAATGTATCTTTCGAGGTGGTCTGTGCTCAGGAATAATGGTCCGAGGTACCAA
AGTTGAAGGTAGGCAGGCATGCCCTCTTCTCTCAAAATCTCTCATCTCATTTCGATCG
AGCCGTCACCTTCATCAGCTTCAACGGGGTTCACAGGGAGTGGTAAAAGTTAACTTAAGAGC
CATTTCAA

15 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 682>:

GNMIH77TR gnm_682

GTCTCCTCATAGTCAGCTTCGCCGAATCCCTCGACCGGGTCCAGTCGAGGTTGGTATGG
GCAAAAGTCGCAATCTCGCCGAAGTATTACTAATCTTCTATTTATAGAAAATCTTATCA
20 TTATCCGTGCTCCTATAATCTTGGGTGCTCCGCGGCTTAAATTCAGAGATCTAAATA
TAAATCCTACAAGTCTTCTTATCATTTCTTTTCGAGGGCTGAACAAATGGGCAAGTTTCG
ACCTCGACTTGGGTGCTGTTGTCGGCATTAGCGTCTTCATTAGTAGTGAAATCCTGCTA
GTCTTAGAGGGCATCATATCGTGAATCTCTAAGTAGTACTCTTCAATCATAAACTTC
TTACTCATCTAGACTCAAAATCAACTGCTTTCACGGTCTAGTAAAAGTAGTATAAGAA
TTCTAAGTACTCGCT

25

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 683>:

GNMIH78TR gnm_683

GTCCGATTTATCATTTCTCCCGAGCAACTTCTTTGGAGGTTTCGTGAGTCCAATATCT
AATTGCTCCTAGGGTTCATTAGGTACCAAATGTGGAGCCAGGGGAAAACATGTATCCCTCG
30 GGGGTCCTAGTCTCTGCGCCAGGAGCAGTCTGCCACAAAACAGCGGTTTTATGTTCAAC
TTTCGTTTCTCTTTTAAATACCTACTATAATAATACCTCGAATCTGGTCTTCAACTT
CTCTGCTCTTCTTAATCTTCAGGATTCTGAATCATATATCCGGTAACTTCGTAGGCG
CAAAAAACCTCCTCATTGCTCTTCTCGCATTTGCTGTAAAGATAAACTAATTCTCATCAA
AAGAAATTCGGTAGTTGCGGGCTCATCTTAAACAGATATTGATCGTCTTTAAGTTCAA
35 TGGGGCCATCTC

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 684>:

GNMIH80TR gnm_684

AATTGTACAGGTGACAGGTTTATGGTGCAGCAATCCGGTACGGCTAGGTTTCATAA
40 TATTTCAAGTGCAAAATTTGTCTTCGGAGAAACATAAAGTCTCCTATAAAAAACTTCG
TGCAAGAGCTGCGGTCTCCCGGTACATCCTAGGGCTGTAAATGGGAGTACCTCGAAGCTC
CTCCGGTCTTGGTGTTCTTCATAGGTGTGCTATACTCGGGCTACATCCGGGTAGACTTGC
TAATTCCTTTATAGTCTCCGCGACGCTTACTACTCGGTCTAGGGGGTATTAGTATGCC

TGGGACTCCTAATCCTAACGGTCTGCTTATGGGATGGTGCTGGGACATATTACTAAAC
TAAACTCTAAGGTGGTCTTTAAACTAGGTACAGACTTCCTTAGGGTGGTTCTCTCCGAA
GGGTCTCGTGGCTTACCATCAATTATCCGGGGCGTCTCTCTAAACCTGTCAGCC
TCCTCCGATTCTGGTCTCCCTGGTCTCC

5

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 685>:

GNM1H83TR gnm_685

AATCCGTA CTCTGCTCTTAAACTTCGTTCTCTTATCGTCCCTCGCGCTATATGGT
CATTTCTGTTCATAAAAGTAGTGTCTCTCAGATTGGCTCTTAAAACTTCGTAATGGCCC
10 TCAATCTGGGACATCTCGATTCCCTAGTTATCTGGTCTAAGATCCTCTCTCTCGTGT
GTTTCGTAGGTCTCCGTAATACTACCTCCAGGAACCGGGCAATTAGTATCTCTCAAT
ACCTCAGAGCCTCCAGGGGGTCTTTCAGTATCTTAGGAGCGGACAGATTCTTGGCGTCTA
ATACCGTCAAGTGTCTCTCCCTCCGGATCTGTGGCGTACTGTCCCTAAGCGCTCC
15 CTGCGCTCAGGGCTTCAGCTTAAAGTTTTTCAAAAGCTTGCAAACTCTCGAGTCCCTC
AATGTCCAGGCTCGGCCACTACTCTAAGTGCCAA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 686>:

GNM1H84TR gnm_686

GTCCGATTTCTCATGGCTGGGGTCTGGGCCTGAACGAGCGTGTGCGGGGAAACGCGAG
20 GTCAGAGGTTGCTAAGGTTCAATCCATAGTAAGCTAGTATTGGCGATGGTTAAATTCCT
ATGCTTAGGAATAAACCGAGTCTTAGCTTGCTTCTAGCAGCGCGGTAGTTACGTCAAG
ATTGATCTTAAAAAGATTGGTCTGCCAGACGACCTATTGGTGGCGGAGCAAGTGTGG
TCTGTTAAGAGTTAAATCGGGTTGGCTACTGAGGCTTTTTCTGGGCCGATGCTTGGTTCG
25 TCGGGTGGTTTCCGGAATACGAGGGCTCTCGTTACCCTAAGAGCGCGCTAGACAGGGG
CTTGCGTTTCCGCGCCGTACCGGGCATTGCTATTACGCGCCGTAA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 687>:

GNM1H85TR gnm_687

GTGCTACTGGATCTACTATTTACCCCTTGGCTAGAGTTCATGCCGAGCAAAAGCATGAG
30 CAACAAAGTTTGGCCAGCTCGGCCAACGCAAAAGCGAGTGCAAGTACGGCATATAGTA
CATAAATACTTTGTAACATAAGATCCRAATGGTAGCAAAAAGAGCAAAAGCAGGACACAA
AGTTTTGGCCAGCTCGGCCAACGACACAGCGAGTTCAAGTCCGGCATATAGTACATAAA
TACTTTGTAACATAAGATCCAATGGTAGCAAAAACGGCACATACGACGGGGCTAATTAACA
CTTCTCTACTTCTCACTTTAACTTCTTATGTACTGCTAACTTTAACTTCTCTCTAACT

35

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 688>:

GNM1H86TR gnm_688

TCATCAATTCTACATCGATAAAGACGATCCAATTCAGGTATGCCCGCTGGTACTATTGGA
CACAAAGTCGGTGTGGGCACTGAACCTCACTTAATCTTCGATGCCGGGGCGGAAGTTATG
40 AGATGGGTTCCATGGGTTCTTAACCTTGCTTGCTTCTGCAAGAGTGGGTCTCTCAGGCG
CTGTTCTTAGAGTCTGGATTCCGGCTCCCTCCGGGACGAACATCCTATAAAGCTTCG
GGCAACCATCGGTACATCTAGGGCGCTGCAGGTCTAGTAACAGGAGGCGGGCTGCTT
GTCAGGCGCAGCGTCAGCTCCATCTGGGGCCGTAGATTAACTCGGAATCACCGACGTTAGC

TTTtagggccgctccgtcagccgcccgtgcaacgtcttcttataaatggccgggggtgtt
 agtccctgsgccgactacggcaagggggtcctgggcacgggcattccnctccggggcttc
 gctagccg

- 5 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 689>:

GNMIH87TR gnm_689

AAAGAATAACCTTCGTGCAAAGTGCgggggTAAATGGGGTACATCCTTGgCTAATGGCCT
 AGGGTAGGTGATCCGGATCTTCTGAAACCTCCTGAATTCGATTGATCACTGTGCAGAAA
 AAGCAGGGAGCCAACCTAACTGCGACTTGCTAGCAAATTGAAAAGTTAGCTCGAACCCGCC
 10 GCTGGTACTCTCTATCTCGGTTAGCAGGGATCCTGAAGCTTCGTGCAAAACTGTATAAG
 GGGGTACATCCTAGGCGGAGCTAACGAAAGAGGTACAGGTGTGCGAGATGCGGTACATC
 TCgCTCGCTGCAACATATTGnTGATCTGGCTGCTACAAATGGGTCCCCGAAA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 690>:

- 15 **GNMIH88TR gnm_690**

TAGAACCgATTTCGTGGTGTCAAGAGGGTGATTTCATGGGGCAGCTGGGTAAAGACAAG
 GTAGCTTCCGACACACAAGAAGACCTGGATTAAAACACCTTATTACGGGAAGGAAGCCCG
 ACGGAGGATAGGTCTTACACTTCAGGGGAGAGCTGCCAAGAGTTAGATCGGCGAAGTCGA
 AACTACTGCTATCACACAAACCACGATGCAGAAAAAGTAGATTGGATGTGTATCGAGG
 20 TGGGAAGGGAAGTGTAGTGGTGGTAG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 691>:

GNMIH89TR gnm_691

AAACGACcAGCTTAGGGCTATAATACTAAATGCGTTATAAAAAATGAGGTGGTAGCAAA
 25 AATAAGTTATACCGAGCTATAAAACCAAGTTCTTGGATTTCATATTTGAAAAAACAACAA
 GTTGcAGCAGGGGGAAGAAAAAACAACGGATTATACAAAAGGGTGTGAGTAAGAGAA
 GTAGTCGGGGAGGAGGGAAGGGGAGAGGGGAGGAGAATTTGGTACTAAAATCCGATAC
 TAAACTCGAAACCTAGTGGGGTAAAAAAGGAAAAACGGAACcAGGCGGAAATACCGCGAA
 AGTCCCGACACGGCTCCGTcAGAA

30

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 692>:

GNMIH90TR gnm_692

TCcGGGGCTGACTAGGGTCCGTGgAGGGCTTAGCCTGGGGTCCCTCCCGCTACGCTGG
 TCAGAAACCTGGTCTCTGCCAACAGCTCTGTCTCGAGGGCACTACTCCTCTCTATGGG
 35 GCTTTACGGGCATAGTCGACCGCGTCACTTCTTATACTACTCCACTAACCCCTCATAGTAA
 GTAGACAAAAAGTGGTCTTCACCAGCGAGGGCTGGGGCTGCAATCAACCCCTAACTAGCC
 GTACATTCCGGCTTCAGCCTGGTCTCTCTGGGGCTTGCGGTTGGCGGCGCGCTCCTCCCGG
 GGGTGAATATGGCCATCGCCGGAATAAGGTGGGGTTAGATCCGATACTATTACTTCT
 40 TTTcATTCTCTAGAATCCcAGTCTTCCCTAGTACTGCTCCAGCCCCAACTCGGTcGTAA
 GCGAGGTCCGcAGCAGAGGCCATGT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 693>:

GNMIH91TR gnm_693

```

5  GGTTTGCCGGCTACCTCCGAGGTCTCTCCTGCCGAATAGGTCGACGCCGGTCGGTATC
   TTGGGCCGACGACCGCTCGTTATTAAAGATCTTCACCGACCTGGCGGCTCTCCTCTACTACC
   ACTCCCGTGGCGTTCTCTATAGAGGCTATCCTCGGCTCTCTTGCTTAAGAATTTGGCTCTC
   CTCTGTTGGTCGACTTCCGTCGATTCCGCCAGGGCTTTCCTCAAAAATTAAGTTCCTAAGC
   CGGGGCCGGGTCACTGGCTGGGCACCGGCTCTCCAGTCAACGACGTCGAGGTGAGCCTC
10  GACTTCCCTCTACACGAGCCCTCGGGTTAAATTTGGGTAGATGCTCCATCACTCTCAGG
   GCCACGCTCAATCCTACCTGCCGCCACGATTGGACCCAGACGAGGTGCTCGCCGTACA
   TTGGTCCCGGTACCAAAAGTGCCGCTGCGTGGGCGTCTCTCAA

```

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 694>:

GNMIH92TR gnm_694

```

15  CCTATCTTGGGTAGTCTTAGGGTTGGTGTCTTATCTCTATACCGTCCAAGTTCATTTCG
   AGTTTTTGTCTAAGATCTTGGCTCCCGGGCTACTCGGSGTGGCGGTAAATTCATTATGCTTT
   CCTCTCCAGAAAGCTCCGCCAGAGCCTGTGGCCCAATATTGGCACCAGGGGAGTACAGA
   CGGAGTAACCTCGGCATTCTCTGTAGCGGTCTCAATTTTGAAGTAAGTCAATCAAGTGGG
20  CTGGAGGGTTCGCTCGGGGTAGTGAGAAAGTTCAATAGTTCGGGTACTAAAAAATCTCTTTTC
   TTCTCTTGTGCAAAATCCGGGATGGGAAAATCCAGGGGAGAGGAAAAATCATATGTTCTA
   AACTAGGGGTTTGTCTTTGCGGTTTACTTCTACCTCTACAATCGAAGTAACGGGCAAGG
   CAGGGGCTTCGGGTCTCTCCAAAGAACATCTACTTCCCTTTAAACGTTAAATCTAAAT

```

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 695>:

GNMIH95TR gnm_695

```

25  CTCAAAGATAGAGGAAAAATGTAAGCCACGCAGCCTAGAGGGACCAAGTACAGAGATGCAAT
   CACAAAAGAAAGGGCGGTGGGGTTGTAGCGGGGACCCACGCAGGATAAAAGCAAAAGTC
   TGCAGCGCAGGAGAGTCCAGCTGCGGTAACCTATTGCAAAAAGACAAATGGGGGTAACTGC
   TTGGGCGACGGAATCCACAAAGGGACATAAAGTTTCAGGCTCTATGGGGAATATAGTGGG
30  TGGAGGCTCCAGACAAGATGAACGAAGCAGAAACAGCTGAGGCCGAGGGGAA

```

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 696>:

GNMIJ55TF gnm_696

```

35  CCGTCCAACCTCGTCAATCAGGCTGGCACACGTGATCGTCTGCGTGCTGCGCTGGAAGCG
   GCCCGTCATGCGCGACAATTACAGGTTAGCATGGGCCGCTGACGGATAGTCGCGCCCGC
   CGAATGCCCTGGTAAGAAAAGCCAGCCAGTTGCTGGCCGAGGACAT

```

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 697>:

gnm_697

```

40  AAATCGAAATAAACCGTGTGTGAACGGGAGACCGATGCCGTCAATTCGCGCGCAGGCGGGA

```

ATCTAGACCATTGGACACCGCAATATTCAAAGATTATCTGAAAGTCCGAGATTCTTGAT
 TCCCACCTTTCTGGGAATGACGGGATGTAGGTTCTGGGAATGACGCGGTGCAGGTTTCC
 GTCGGATGGATTCTGTCATTCCCGCGCAGCGGGAATCTAGACCTTAGAACACAGCAAT
 ATTCAAAGGTTAGCTGAAGCTTTAGAGATTCTGGATTCCCACTTTCTGGGGAATGACGGG
 5 ATTTGAGATTGCGGCATTATTCGGAATAACAGCAACCGCTCCGCGCTCATTCGCGCGCA
 GCGGGGAATCCAGACCTTGGGATAACAGTAATATTCAAAGATT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 698>:

GNMIK41TF gnm_698

10 CCGAGTCCGTGCCGCTGAAGATGCTTTGGGCAAAATGGTGAAAAACCATAGAGGAATGGC
 GTTCCCGAGATTGCTTTGGTTTGACAAACGGCAGCGAAATTTCAAGCCACAATATGTGA
 TTCAAGAAGCTTGCCGAGATTACCGGCAATTTCGGCAATCATCACATCGGATGTAGGGCAGC
 ATCAAAATGTTTGGCGCTCAATATATCCCTTCGAACGTCGCGGCAATGGCTCAATTCGG
 GCGGTTTGGGTCCGCAACACAGCGCCTCTTCAAATGTCAGGTCCGAGCGCGCTGCTGC
 15 ATGGCTTTTCGAGTTTGGGATTTTCGTTAATC

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 699>:

GNMIK42TF gnm_699

CCGTGGTGTGACTGCGTACCTTTTGTATAATGGGTCAACGACTTACATTAGTAGCGAGC
 20 TTAACCGAATAGGGGAGGCGTAGGGAAACCGAGTCTTAATAGGGCGATGAGTTGCTGGGT
 GTAGACCCGAAACCGAGTGATCTATCCATGGCCAGGTTGAAGGTGCGCTAACAGGTACTG
 GAGGCCGAACCCACGCATGTTGCAAAATGCGGGGATGAGCACGATGGGCGTGGGTCTGC
 CTTATGCGATTGGTGCAAAACTTGCCGCCCGGATCAAGACGTATTCTGTATCACCGGCG
 ACG

25

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 700>:

GNMIK48TF gnm_700

CGGGTTTCGGTTTTTCCGATAAAATTCCTGTTGCGTTGCGTTTTTGGATTCCCGCTTTTG
 30 CCGGAATGACGTTGCGTGGGTTTTCGGTTTTTCCGATAAAAGTCTGCTGCGTTGTGTTG
 CTGGATTCCCGCTGCGCGGGAATGACAGCCGCGGACGGGAAACGACCATACACAATTA
 TTGACAAACCCATTATTGCGAAAGTCAGCCTAGGAGAAATCCTCTGTAACCGCGTCTGA
 GTCTTCTTTCCCGCTACTCAATAAATTTATCCGCGCGCTCTTACCACCAAAATTCATT
 ACAATTTGTAATAATCGTGCGCC

35 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 701>:

GNMIL13TFB gnm_701

CGTCCGACCAACCGTTCAAACTTTTCATTTTACCCGACCACGCAAGCCGCGCAACAAAA
 ACAAGGGGCTGTCTAGATAACTAGGACAACTGTATTTTACTAATTGTTTTAAACGGA
 40 CCAGGACTTTTAATTTAATGGTGGTTAAAGGCATTGGGAATCTTTAAATCAAGTTAA
 AA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 702>:

GNMIL82TFB gnm_702

5 CCCGACAAATTTTGGCGCATGGCTTTGATGCGGCCGCGCATTTCATCGAGTTCGGCAAT
CCATTGTGCTTTCAAATCATCATTTTTCAACATCGTCGCAATGGTGTTCGCACCGTGTGA
AGCCGGGTTTGAATACAAGGTACGGATGATGGTTTGTACTTGGCTGTGGGCGCGGGCTGC
TGTTTCTTCATCTTCGGCCACCACCAAGTGAACGCGCGGACGCTCGTTGTACATACCGAA
TGTTTTTGAATAAGAGCTGTCTATCAGCAATTCTGTATTGTGTTTATGATCACTCGCAA
GCCGTTTGCATCTTCTTCCAAACCAT

10

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 703>:

GNMIM22TRB gnm_703

15 CGGTACGGGCGCGAATTGTCCGCATTTCGGGCTGTACGAGTTCGTCAACGTCAACACCTA
CTGGGAGAAATGACACACCCCGTCCCGCTTCATACGCTATCGGGTTTGCCTAGAGCCGA
TTAACGGCAGTATTGTTCAGCGCTTATTGTATTTCCGAATCAACTCATCCTTGTGTTTT
TGCAATTTGAATTTCCACCGCGCTTCAGGTTTCATTTGTAAATCCGGCAGTTTTCTCTTT
GGTCTGCCGTT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 704>:

20 **GNMIP07TF gnm_704**

CCGCAATACAAACCGATTTTCSACTGGTCGGAACACGACGTGTGGGCATACATCCTCGC
CAACAATGTGCCTTACAACGATTTGCCACGTAAGGATCCCTTACCAGAAATGCCGCAAAA
CACATCAATGACTATCTCGCCAAACGCGGCAAAAGGCTTGGGCGTACGCTTGGGTGTGAAA
25 ACCAGCGGCTGCTCGGGGATGGCGTACAACCTTGAATTTGTGCAGGAAGCCGATGGCGAC
GACCTGATTTTCGAAGGACACGGCGCGCGCATTATATCGATCCGAAAAGCCTGGTTTAT
CTGGATGGCAGCAAGTCGATTACACCAAGAAGGTTTGCAGGAAGGATTCAAATTTGAA
AACCCCAATGTCAAAGACTCTCGCGCTGCGGCGAAAAGCTTCCACGTTTAAAGCATAAAA
ACGGCGGGACCGTATCAAAACCGTCCCGCCATTTTACGCTTTACTGCCTGTTGTAGCTGC
CTTTGCCTTTCCTTTCCGTTCCACCTTGTGCGGGAACAAAT

30

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 705>:

GNMIP26TR gnm_705

35 GACGTCGAGGTTGATGGAGTGGCTGTACCCGACCAAGCAGAACCGGTGCGGTTTCACC
GACGACGCGCGCATGGACAACAAGATGCTGACACGATGCCCGGCATCGCATCGGGGC
GACGATCCGACAGATGCTCATCCATTTCCGAACGCTAACGCGTAGCTGGCTTCTCGCAG
TTTCATCGGGCAACCACTGAGCATCTCCTCGCTGCCGGAACCAACCGGCAACATCAG
CAGGACCAACGCGCAACGCCACGGCAAGGCGCTCTGCTGAAATCCTATGTTGGCGATCCA
CAGGCTGAAGACGAATAACGCGGCACGATAGAGGGCAGCCGGC

40 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 706>:

GNMIP64TR gnm_706

ATGGGCGTGGCTTTGGCGCGGGCGTCCCGTGCCGCGGTGCGAAGTCAGCCTGATTAC
 GGACAGCTTCAAAACCGCGCTGCCTTTCGGCATATCCGATACGGTTCAAGCCGTCAAGTCC
 5 GAAAAATATGCATCGCGCAGTGCATCGTTTAAATCGACAAACAAGATGCTTTTATTTCTGTT
 CGCGCGCTCTCAGACTATAGGGTTAAGAGGAGGAGTACTCAGAAATTCAGGAAAGATAGA
 ACTGCCAAACCGTTATCCATCGAATTGGCTGAGAACCCGAGATTTTGGCTTCTATTGGC
 TCATTAGCGAA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 707>:

GNMIP74TR gnm_707

AGTGGGTGTCGATATTTACAACCTGGGTAACCTCACCCGTTCCAACCACTCTAGCAATAT
 CAATCATCGTCTCGCGTCAAAGCCGCGATGTTTGCAACG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 708>:

GNMIQ34TF gnm_708

CCTGTCGTCTTCGGCATCGCCAAAGAAGGCTCGCTCAAAACGCGTCATTACCGGCGAAGAC
 GAGGGAACGCTGGTTCACTGCTGATTGACCATAGTGTGCGCAGATATAGTCGCATATGGG
 CTCGAGCAGCCATTATTATATGGAGATTATAGTGACATCCCATGGCATCGACATCAC
 20 CTCTGGTGGCAGCATCCACGCCATCCCCACCGCATTGATGCCCCCAAGGCAGCACTAA
 CATCGAGGCTCCGGCGGAA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 709>:

GNMIQ67TF gnm_709

AAACTGACGTTTGTCTTTCCAGGATGAGGTAGAACCATGATTTATCTGTTTACAGGAAAC
 25 ATGGGGACAGGCAAAACCTCCGCGTCTCTCTATGATTGAAACACGAACAGGATTG
 TTCAAAATGAAATTGGCACACGGCACATATGTAGACAGACCGCTTTACTTCTGCCATATC
 GACGGATTGGATAAACCGCAGTTGAAGCCCA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 710>:

GNMIW65TR gnm_710

TCCATCGGGTCGAGCGACTCGTCCAACTATGCCGCTTCCTCCGCTACGGTATCCGTACC
 AGCCTGCAGTCCAAACATGTCTTGCAAACTTGCGGCTTCGGTTGCACAAGCCGATAACC
 CCTTCAGTTATAGTGGACAGCAACCGCTTTTGAAGACAGCAGTGATATTGTTGGAT
 TTTCCGTTTAAAGATTGTGTGTTAAATGCGCGGCAAAAGCACCGAGGAAGCGAAGAAAT
 35 TATTTTAAACGCAATAACAGCCAGCCAGCCAGCCAGCCAGCCAGCCAGCCAGCCAGCCAG
 CCAGCCAGCCAGCCAGCCAGCCAGCCAGCCAGCCAGCCAGCCAGCCAGCCAGCCAGCCAG
 AGAGAGACAGAAATCTTTTTTAAACAAACCTTGCTTTTGATGAAATTGATCGGCTTTT
 TGACGCACAAGCATCTCAAATTTCTCGCTATACCGCAGACGGCAAGCAAGCCGTTTG
 CGCAATCAAGGACAT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 711>:

gnm_711

5 CAGTTGGCATTGTTAGATAATTTGATTACAAATGGGCGGAACTGGTTCGAAGTGGGC
AAAAATCACCAGTgYACCTTCAACCGAyTGGACGCAACGGCTAATGAAGGTATTGCA
CTGACACCATCCCAAGTAGCACAACTAAAAAGAAGCGCTTTAGTTCCCTTTCTGATAAA
GCTAAAGCAGCTATTGACGCCGCCCGGACCGCATTCGCGTCTGTATGcNtACACGGGG
CAGGATTCCAACACACTTATTACATGAGCGAGGAAGATGCGCTTAATATCGTCAAAGTA
10 ACCAACGATACATACGACCATCTCGCGCAAAACATCTACCAAAACCTGTTGTTCCAAACC
CGTTTCGAGCCATATTTGAATCAAATCAGTTTCAAATGGAATGATACGTTCACTTTG
GATTTTAGTGGTCTGTTCAAGCATTTAACCATGTCAAAGAAAGTAATCCGCGATGGTAC
CGAGC

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 712>:

GNMIX74TR gnm_712

15 TAATGCCTGTAATCCATGTCTTTAACGGCAGCTCTGGCAGAAGCGGCCACAAGTTCTG
TTGACCCGCAAGCGCTTACCTCCGCCATGCGATGGAATACCTGTCAAGTGTCCGCGAGGC
GGATAAAATAAAACTGAAAAAGAAATAGGTATCAGCAGCCGTGCTTGCATAGATTTTCT
20 CCTTTGATGAAAAACAAATTGTATCAAAATTGTAATATAGTGGATTATCnGTCCGCGTA
ACGCTATTGGACGGTCCCGCTCATGCCCGGAATCCAGTGAAGGAAATTGAAGTGGCCCGC
GTGTTACAATATATCGGACTGCAAAGCGGTTTCGACCACGGAGGCAGCCGTCGCTTTATG
CTTTAGTGTATGCGGCAGCAGGTTTTTTGGAGCGCAAC

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 713>:

gnm_713

25 CGTACGGCTTCTCTAAAAATACCTAAACCGTCATTCCCACGAACCTACATCCCGTCATT
CCGACGAAAGTGGGAATCCAGGACGAAAAATCTCAAGAAACCTTTTACCCGATAAGTTT
CCGCGCGACAGACCTGSAATCCGCGCTGCGCGGGAATGACGAAGCTATCCATACCGGAAA
30 CCGTACCGCGTCATTCCCGGAAAGTGGGAATCCGAAGCTAAAACTCAAGAAACCGCT
TTTCCGATAAGTTTCCGTACCAACAAGCGCTGGATTCCGCGCTGCGCGGGAATGACGAAG
CCATCCGACGGAACCTGCGCGGGGCAATTCGGATATCGTGGTTCTGGCAGCTTGGCGG
CAGGATGCGGAAGACTTCAACGAAGCCTATTGCGCGCATGTACGCGCAAAATGAACATA
CGGGAACATTTGGCATATTTTGGCGGAGAGCGATATGATCAGGCAGAACGATACGCG
35 CTTGAACCTGTTCAACGCGGACATCGGACTGATTATGGAAGATGTCGGACGGCAGGCGACG
CTTGGCCGCTATTTTGGCGATGCGGACGGATTAAAAAGGTAGCGGTAAAGTGCCTGCC
GAATTTGAACCCGCTTCGCCATGACCGTCCACAAAAGCCAGGTTCCGAATACCGGGA
GTATGGCTGCTGCCGCTTCCGCGCACCTTCGGACGAAGGGGACGATGCATTGTCCGGA
TTGAGTAAGGAGCTGTTATATACCGCATTAACCGCGGAGAGAGAAGTTCGATTCTTC
40 GCGGGGAAGAAGCGCTTCGCGCAAGCTGCGGCCACCGTCAAAAACGCGTCAGACGGCATTG
GGCAGTATGCTCGAGCGGGTATTTTCAAGAATAATCCGCCGAATGCCGCGCGCGCGC
CCCTTATGCGCTTTTCAAACGGTATAGGAAAGTGGTTTCCCGGGTTCGCGCAAAAGCAAG
CGGATCGCTCGGATTCGCGGCTTTTTGTGCTTCGGCTTGGTTTCATCATATCGCAAC
ACGCAAAACCGCGCTGACAAATGCCTTATCCATGAAAAATCGGATG

45 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 714>:

GNMJ95TF gnm_714

CGCTGCGGCATAACCTTCCGCCCTTGTCGACGGCAGTATAGGCAGCCGTGTTGACAATGGC
 GTCGGGTTGGAACTTTTGACCATGTTGCAGACGGCATCGGCATCGGTAAATGTCTAGGGA
 TCGGGAATCCGTCGCAATGGTTTCCAGTCTTCCGGAAGACGGTCGCGCAGGCAGCGTGC
 5 CAGTTGGCTTTTCGAGCCTGTCAATAGGATTCTCATGAGGTATTTCCCTTTGGTAAAGTG
 TATTGTAGGACTTGCTGTCGGTATTATAGTGCCAAAATTTTGCCGCTGTGCGGCACCA
 ATAAATCGACTTTGCCAGTTTGCGCGCAGCGGTAAACAGCATGCAAAGTGGTATGATTCA
 ACTGTTTGTGTCGTGTTGACAAATAATCAATACACTATTTCAGCCTCCTCAAACTACT
 10 TTGGCTTCGTTTTTCAATTTTCAACCAATTCGGCAGCGCTTGCTACTTTTACGCGTGGC
 TGACGCGCCTTAGGTTTCGGCAAATTTACCGTTTTCAAACGAGGTGAAATGTCGGCAACC
 AAATCGTCAGGAGTCAGTTTTTCCAAAGGTTTTTCTTTGCCGCCATGATATTTGGGAGT
 TTGACAAAGCGCGGGTCGTTT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 715>:

15 GNMJ78TF gnm_715

GGGTACTAACCGATGACTTTGACGAACGAAGCGCTTCGCCCCAAGCGTTCCAATGCGCTG
 TGAATCTGCGCGTACCGGCGGTGCTTCGATGTCGATGAAGAACAGGTATTTCCCAAAA
 ACGGATTTGCTCGGACGGCTCTCAGACTAGGTATGGAATACCCGACTCCGTCAG

20 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 716>:

GNMJ88TF gnm_716

AACCGCCCCAAGCCATGATTGCCAAACACATCGACCGCTTCCCGCTATTGAAGTTGGACCA
 GGTGATTGATTGGCAGTCGATCGAACAATACCTGAACCGTCAAAAAACCGGTTACCTCCG
 25 AGACCAACCGCGTCTGCCGATCGTCCAGTCCAGTGGTGTCCATGTTCAAAGCCGTTCTGCTAG
 GACAATGGCAACACTCTCCGATC

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 717>:

GNMJH15TF gnm_717

CCGCATAATCGAGTGTACCCATTTCTGCTTGCCATCGGTTTCAAACCGCAAGACAAGG
 30 CGGAACCGCTCAAAGTCGCGCTTCACATCTTCTGACGCGCCCGCCGCGACATGAATG
 TCTATCTTTTCAGGCTGGCAACTGATTGACGGTATGGTAAACGTCTGACGCATCGTCCAG
 ACCACTAAAGCGAATGTTGCGGCTTGCGCGGCACATTCTCCGTCAAAACAGCCGATATTT
 CCGGC

35 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 718>:

GNMJ79TR gnm_718

GTATGGGTTTTCCGCGCGGGGAAACGTGAGGCATCGCGCGGTATCGAAATAACCGGAC
 CCGCAGACCCCAACGGCAGTCCTGAACGACGACCTCGTCGACCGCCCGCCGCGACATGAATG
 40 AAAGCGCGGACATTTCTGACACATGCCGCCGCAATGGGGAATCTGCGCGCAAGGTTTCG
 GGCACAGTACGGTGCCTGAGCGTTTCGAAATAAGCCGATACGGTATTGCTTTTCAGCC
 TCGATATTGCGCACAGCGTGTCTTTGGGCATAA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 719>:

GNMJJ84TF gnm_719

- 5 ATTTTGCTCAATATTAGGAAGGTTTTAAGCAATTGAAAAATTGTTGGCGCATTTTATGCG
GTCAAATTCGTTAACGACAGTAGTTTGCAGGCTCTATATTGTTGATATTTTGA
GACATCGATTTTTTAGGAAACGATTGTTACGG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 720>:

GNMJM49TR gnm_720

- 10 CGTTAAACGACGACGCGGCACTGCGCATTAAAAACGTGCCGATTGTAACGCGCCCAAT
ACGCCAAATCGGGAATGCCGTCTGAAGCCAGCCACAATGCCAGTAGSTCGGCCACAGT
AAAACGAGCGTCCCAATGGGCTTGTCCGCCGATCAGGCGCAGGTACACATCCAAACGG
TCGGACAGCGCTAAAAATAAAGGGGATTTAGGATTCATATTGCCGCGCAGCTTGAAAAA
CGGTATTTAGCCGAGAAAAAGTTTCAGTTGCGGCGAGAAATAGTCGGTAAACACGATT
15 CGTCAACGTGCCCGCGGCTCGGTAATGCTGCGCGTGTATCGAAATATCCTTGATCGC
GC

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 721>:

GNMJN57TR gnm_721

- 20 CGGCTGCTTCTATCTTTGATGCTCCACCATAAAGGTATTGCCGAAACGCGGGATGGAG
GTTTTGTTTTCTGCCCGCGCCGTGATCGCTTCGCGTTGCGCAACGCGCCTGTTGCA
GCCTCATTTGCGCATAATCCTGCTCAAGGCGGATTTCCTGTATTTTCGCTTATCCGAAG
CTGTGATATTAGCCTGTACTGGTTTTGCTGCATCACAACGCAAAAGCGGCAACGCACA
CGCATCCAGCAGAAAGGAATTCACTTTGTTCAT

25

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 722>:

GNMJJO71TR gnm_722

- 30 CCCATACTATATGTCTTAAGTGAGGAATACATGGTTCATTGATGAACCCAAATTGACCC
TTGTAGCAGATGCTGTCAAGTCCGCCACCCATATGTTCTTTGCCTGTACAGAACGATACA
GCCCTTGTCCGTACGAATATCGTCTATGCCGCCATCCACAACCTCGGCGGTATGGCGGG
CGCAACCGCAAAGTTCGGATTCGCCAACGGGAATTTTGACGCTGACGGACGACGACAAA
CAGGCTTTGATGGACGATGTGCAGGATTTATTTTCGGGTCTGATACCGTGAATTTATAAA
ACCTCAAAAACGCGCTTTTATAGCGCGTTTTTTATGCGGGTAATACAAACCCCTGCCCA
AGATATAAAAATCAATCCTGACGCTCGAAAAAGCCCTGAAAACGATTAATTGTGTAT
35 CGCGCGACAGGTTTTAAAAAATGG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 723>:

GNMJQ51TF gnm_723

- 40 GCTTCATCGTCTTCATCCCAATCTGACCCCAACATTGCGCTTTTGTTGACGTGATGA
CAGGTAAACATACCTTTAATTCGCTCTCACGGGCTTGGTTCGGGCTGTATTGACGTTG

AAAAAGTCATTTCGATGTCAACGG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 724>:

gnm_724

5 CAATCCGTTAGCGAGGTGCCGCCGGCTCCATT CAGGTCGAGGTGGCCCGGCTCCATGCA
CCGCGACGCAACGCCGGGAGGCAGCAAGGTATAGGGCGGCCCTACAATCCATGCCAAC
CCGTTCCATGTGCTCGCCGAGGCGGCATAAATCGCCGTGACGATCAGCGGTCCAATGATC
GAAGTTAGGCTGTTAAGAGCCGCGAGCGATCCTTGAAGCTGTCCCTGATGGTGCATCT
10 ACCTGCCGTGGACAGCATGGCTGCAACGCGGCGATCCCGATGCCGCGGAAGCGAGAAGA
ATG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 725>:

GNMJV83TR gnm_725

15 TTTAAATGGAAATTTGAACTTTTATCTCACTGTTGTTAAAAACGCCGTTTCGTACCCCTTT
AAATACAGCTCAAAATCGCGCTTTGGGAATGCCGTCAAATTCGTAATGACGTTTGGCC
CGGTTCCAAAAGTTCTCAATTCATTGATATGGTTTTGTGCTTCAGCAAAATAACTTTCA
TCTGCTCTACTTCGCCATCAAACATTTCCAAATGCGGACTGTTTTGATAAATAAGTAAT
CGTAAACGATGAAAATAATAGGCTGCGGTACTTTTATTAACGCCCTACTAATCTGCTGTC
20 GTTCTTGAGTTACACTGCGGACAAACAGTTCAATGAGTTTATTTGTTTATACCGGCTTA
GACGACTTTTCTCATAGGGCAACTCTAACTTAATTTGAATTTCCCTAGTTATCCCTAA
AGGGGGGAAACCCAAAGGGGGCCCCCCCCCCCC

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 726>:

GNMJW65TF gnm_726

25 CGAATTTGTCGGCGGCGCGCGCAAAATCATACTTTGCAAAATTTAACAATTTGCAGGG
GCAGAAAACAGGAAGCTTTCCTTTTCGTGCGAAAAATCCTTATTCACCGCCTTGTAGCC
GGAGCCGCTCAAAAGGCAAAAATTTACCGGTTTTTATCGGTAAAGAATATCAGATAAA
AACAAATATATAGGAAAAATACGACAGCGGGTTTATCGCGCATTGCTCGAAATGAA
30 AATATCAACCGTTGTCAAGACTGGAGAAAATGCCAAAAATCCACTATATTGTCTGCCCTTA
ATTTATTTGAAAAGACTGTGCTTGAATATCAAGAGTGGAAAGGAAGCGATGAATACAC
CGACTGATTTGAAAGTAACCAACGAGACGGAAGATTAGAAGCCATTGATTTGGATAGA
TTCAACCGTGTGCTCACTTGGCGCGCGGACGGATTGGAATAATGTTCCGTGTGCGAGTGC
AGTTGAAATCGCACATCCAGTTCTACACGGCATCCGACCGACGACATCCACGAnACCA
TACTCAAGCCGCTGCGATTTAATTTGCGAAGATACCCCGGACGGTGATGCTGCCAACT
35 TCTGATTTAGTGATATGTTGTTTTGAGGTGCTCCAGTGGCTTCTGTTCTATCAGC
TGTCCTTCTGTTGAGCTACTGACGGnGTGGTGCGTACGGCAAAAGACCGCCGGGACAT
CAGCGCTATCTGCTCTC

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 727>:

40 **GNMJY95TF gnm_727**

CTAGAGATCCCTGGAAAAACACAGCCGGGCACACAGATATCTCGCCTACCGCGACGCG
ATTGCCAACAAACTGCTGGAAAGTCGTTTCGCCACTCGCAAAATCGACAGCCTCAGCAGC
AGCCTGCGCGGGAAGTAGAAAAACATCCGACAGTTCGAACGCGAAATCCGCGACATCTGC

-832-

CTCGACCGCGTCCATATGGGACGCGACTACTTCATCCAAAACCTCCTGCCGAAATCACC
AATCTAGAATGGATTGAAGAAGA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 728>:

5 **GNMKA52TF gnm_728**

GGTCAGCCCGGCAAGGGTGAATATCTGATCGATATGCCGATGGAACCTGTTGCAGAAGGC
GGAGGGCGCGCTTTGTATGTCGGCGACATCGCCAGTACAGCCGCAACATCCAAAGCCGG
TATTGCTTTTATTGTCGAAAGGCGGAACACCGCCGCTCAGGGTGGTCGCATCGGGCAG
CAGGGCGGCAAGTTCAGACCGCATTGCTGCGAGAAAGTGGCATGATTGCTGTCGGCAT
10 CGGTGCTCCGTATTCGGCCGCTGCGTATGCAGCATGAAGACATTCCTTCCGTATACAGG
GGATTGCTGCAATGTGGCGAAAGCCAAAAGATTGCGCTGCTCATTGATGAATAGG
CACTGTGCGATTGCACACGTTCAATGGCTGGCGTCTTATTCCGCAACCTGCAAAAGCGTC
GTTGCAACGCTGTTGTTG

15 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 729>:

gnm_729

CATTTCCATACCTATGAAATCAATAGCAGGATTTAAGTTCAAGTTCAGCTCCAGATCTTC
TAAGCTGGAGGACAAAAAGGCGAAAAGATATGTACTGGTTTCGCCTCTTGTTGCTTCTT
20 GCTGATCAAGAACCTCCCGATGTATTGCGAAACAAATGTGCCACGCAGTATATGTTAC
AAGTCGCAATCCCATCCCTGTTGATCAATCAGTTGGATATTGGAATTGAATCAAGACA
AATGGGTAAAGACAATAACTCAAAAGGATCACACCTTGCTTTCAGTTTC

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 730>:

gnm_730

25 AAGGGGTACTAGAGCATACTCAGTGaAGAAGCAAAGAAAAATCAACAGGTTTCAGTAGAA
AAAAATCGAAACTGGGATCGTAAGTTTACCAGGAATTGACGAAACCCGCAATCTCGTTA
CTCTCTTTCGAAAGCCCCAAACACGAAACAGTCTTGTCAGTTGCTCAAGTCCCGTGTTCC
TGAGAAAAAACCCATRAACCTAATCAACACCCAAATGTTAAAAATCCATCTTTATGAGAA
ACAAAGAGAAAGCTAAATCAGAGAGGAAAGTTGGTTCATACCTCTGAGTCTGACCAGAGAC
30 GACGGTAGCAAAAACGGAATTTGATGCGAGAAAGCCGAGAGGGTTTCTTATTTATTT
TTTAGTCCTTTAAACCGACCTTTGACAAAAAAAACGACTTTGTGAAAACGGGCGCGTT
CATATTGGG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 731>:

35 **GNMKV51TF gnm_731**

TCTGGTTCGAACCTACATCATCCGCCATGACGTTCCGATCGGTGAACGACGCAACTACC
ACCTCTCCAGACATATGAACCTTATACGGCTTGGGCGGCTGCGGAGG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 732>:

GNMKY49TF gnm_732

CAAAAATCGAAGCGGGTTTGTCTGTACTCGGCGTAACGCATAGCGACACAGAAAAAGA
 TGCACGCTATATCGCCGACAAAATCGCCATTTCGCGGTGTTGAAGACGAAGCGGGCAA
 GCTGAACTCTCTTTGAAAGATGTCGGCGGCGGTGCTGCTGGTGTCCGACTTTACGCT
 5 TTTATGCCACGCGCAAGCGGGCGCGGCTTCGTTTCCCAAGCCGCACCTGCAGAACA
 AGCGCAGCAGCTTTACCTGCGAAGCGCGGAATGTTGCGCGGACACGGGATTCATGTCGA
 AACAGGGGCTTCCGACGCATATGCATGTCTTAACGTGCTGAAGCACCAAGTGAATCG
 GTTCGGTACTATCTGACTGTCTGCGGCTTCGTCCGCTTGTCTGATTTTTGTTAATCCA
 CTATAAAGACCGTTGGGCATCTGCAGCCGTCAATCCGCGCAGCGGGAAATCTAGTCTGT
 10 TCGGTTTCAGTTAT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 733>:

gnm_733

TATGCTTGGGACAATAGCGGAAAAACCCGCTTGCCTTCGGCAAAACGGGAAAAACCGCA
 15 AGCGGATGCTCTGATACGGATTTCGTTTCTGCTCGTGCGGCAAAACGATGTTACGCCCA
 CCGAACCAGACTTCCTGCAAAACGCGCCCTTGTTCGCGCTCCATAATCCCGCGCCCGC
 CGCCGGAATGACGCAATGCCGAATCCGACAGCCGCGCGCAGACGCGAGCGGAAGC
 CATAATCCGCATGATTCTGCGGCGTGCGCGGCTGCCGAAGATACTGACTGCCGGAACA
 CGCCGCCCAATGCTTCGTCTGCTGCTGCGTTCGGCATCATACGTGCTGCTCGGGA
 20 CACGGTTTGTATTCTCCATTCCATCTCCGTTCAAAAACAGCGATTGTACACCGTCAAAA
 ACGTATAGTGGATTAACAAAAATCAGGACAAGGCGAAGCGCGAGACAGTACAAATAG
 TACGGAACCGATTCACTTGGTGCTTCAGCACCTTAGAGAATCGTTCTCTTTGAGCTAAGG
 CGAGGCAACGCGTACTGGTTTTGTTTAATCCCATATCATATAGATTTTTATGCAATTTG
 GTCAGAAACAGCGAAGACAGGCGAGGAAACGCCCTCAGTCCATCGCGTCTTCAAAATCA
 25 TCCCAAAATCGCTCAAATTCGTTCGATATGCGGTATTCGCTCCGCGCAAAACATCAGC
 GCTCTTTTGTCTTTGGCGGCTTTTTGAATGCCTTTCTCTGTTTTTCGGGTATCTGCTGC
 CATCTCAACTGACGGTACACGTCGTAGCCGTCGCCCAAAAGAGGCATACCGTTGCGTG
 TCTTCGCGCAGCAGCGCGCGGTATTCCCAACCGCTACATATCCGTCGCGCAGCAGGCA
 CTTGGCTTATATATG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 734>:

GNMLC88TV gnm_734

AACTACACAACCGATTTAGCGAAAGGTATAAAAAATGCGGGTCAGAATTTAAACATCAA
 TGCAAACGCTTGATGAGCATATAAACCATTTGATGACTGCGCATTAAACAGAGATACAC
 35 TTAATGTTACATTATCTCGTCAACACTAATCAGTATTTCAGTCTTATGTACAAACAG
 ACAGCATTATTTAAAACATGCGCTAACTAAAAATAGATAATAGTAAATCAAAGTCATTC
 TTCATTTCATGGAAACAAGAAAGTGAAGCCTTTGATTATGTATTGGTGCAGATGGCATA
 ATTCAATTGTTAGAGAAAGCTATTGATAGCCAAAGCAAGGTTCAATATCAAGGCTATACAT
 GCTTCGCGGGCTAGTCGATGATATTCATTAGATGAACGAGATGTAGCTAAAGAAATTT
 40 GGGGCAACAAAGGACGCGTTGTTATTTGCCATTAAATGATAACCAAGCATATTGGTTTA
 TCATTAATCAACGCTAAAGAAAAAGATGTCAAATACCAATCATTGGTAAGCCACATTTAC
 AAGCAGATTTAATCATTATCCCAATATTGAAGACAATATTAGATAAACCAAGATGAA
 CAGGCATTATATTAAACGATATTTATGATATGAACCACTAAAAATCTTCGTTAAAGAGC
 GTACTATTT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 735>:

GNMLC88TH gnm_735

ATATGAGCGTCGGAGTTATAACGAAAGACATTTATACAAAAGAACGAAAAGATCTTAG
 TTAATACAGGTGTCTTACCTGAAGATAGAATTATTGGTGTAGAAACAGGTGGTGGCCCTC
 5 ATACAGCAATTTCGTGAAGATGCTTCTATGAACCTTGGCTGCTATTGATGAGTTATTAGAAC
 GTAATGATGATATTGAACCTTATCTTTATTGAATCTGGTGGCGACAACCTAGCAGCTACAT
 TCAGTCTTGAACCTTGTAGATTTTCAATCTATATTATCGACGTTGCTCAAGGTGAAAAA
 TCCTCGTAAAGGTGGACAAGGTATGATTAATCAGACTTTTTCATCATCAATAAACCGG
 ATTTAGCACCACATGTTGGCGCATCGTTAGAACAATGGCTGAAGATACAAAAGTATTTA
 10 GAGGCGACAGACCATTCGCGTTTACTRACTTAAAAACAGATGAAGTCTTGATGAAGTGA
 TTAAGTGGATTGAACGAGATACTTTACTTAAAGGATTATCATAATGCTCAACAAGCTTG
 GACAGGTCAACTTGATTTAACCGTATTTAATAATGGAAGTCGTTCCGTTGCACGTGATAT
 CTTTTTGGAAAAGCATTAAAGTTAT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 736>:

GNMLC90TH gnm_736

AACAACTATTATGAACCCAAACCCCTTCCGTTTCCGCGTACTGCCCTTGACGAAGTACG
 TATGCCAATCGGCGACGGTCAAATTGTAAGCTTTGACCGGCTGCTGTTGAAGGTATGTT
 TCTGAACC

20 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 737>:

GNMLD05TH gnm_737

GTACGGCGTTACCAACCTGCTGCTGCTGGGCAATTTGCTGCCGCACAAAAATAAATTAT
 CAGGGAAAGATTGTAAGGCAGCTAATTCACTAACGGTTAACGCCGATTCTGTTTCATATT
 25 GAAAAACTTTGGCGCATATCTCTCTGTAATACAAACGGCTGGTTTGTGTGCTGTTGTCAACG
 ATGTATTACGGATATCACCTGTTTTCGGACGTAATGGTTCATGAATATCGTTACGGTTA
 CCTCCATTTTAAACAAATGCCATTTTTCCTAACATTTGTGCCGAATGATTATATCTTCA
 TGATTTCGAACGTGTGGATTGCTTTCGCCATCATCCAGTTTGGGAAAATGTCCTATTGCT
 GATCCACACGCTCTGATGGGAAATCTGCAAAATGTTACGGAATGAATTTTGCCTTATACC
 CTCCTCCCGATAAATATCACTCGGCTACTTATCTTAGGAACACCGAAATCGGCTGCACTC

30 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 738>:

GNMLE03TH gnm_738

TCGACATTGCCAACAGCGTCCCGGTTGTTCCGGATAATATGACGGACAACGGCAGAACCG
 ATAAAGCCCGCGCTACTGGCAACAAGTGCCGCTCTGAACAGCACGAAGCCTTCCGTTTCC
 35 ACCATAITTTCCACCGATGAAGTCTATGGCGATTAGCGGCGACGGACGAGTTGTTTACCG
 AAACCGGCGCTACGCGCGTCCAGGCCCTACTCTGCCTCTAAAGCGTCCAGCGACCAAC
 TCGTCCGCGCGTGGTTGCGTACTTACGGCTTGCAGCATTGTAAACAACTGCTCCAACA
 ACTACGGTCTTACCATTTCGCGAAAACTCATTCCTTTGATGATTCTGAACGCGCTTG
 ACGGCAAAACCGTGCCTGTGTACGGCGACGGTATGCAAAATCCGCGACTGGCTGTTTGTG
 40 AAGACCAACGCGCGCACTGTATCAGTTGTTTACCGAAGTGTGTCGCGCAAACTACAC
 ATATCGCGGCGCAATGAAAAAGCCAATATTGAAGTCGTCAAACCATCTGCGCCCTGCG
 TGGAAAGACTCGCTCCGAAAAACCGGCGGTTGCGCGCTTATGAAGATTGATTACTT
 TCGTACAAGACGCCCCGGCCATGACGTACGCTACGCGCTGCAGCGACGC

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 739>:

GNMMC45TR gnm_739

CGCGGGGAATGACGAATCCATCCGTACGSTAACCTGCACCACGTCATTTCCACGAACTCG
 5 ATCCCGTCATTCCCACGAAAGTGGGAATCATGCTTTTTGAGTTTCAGTCATTTCCGATAA
 ATTGCCTTAGCATTCATGTCTAGATTCCCGCCTGCGCGGGAATGACGC

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 740>:

GNMMC79TR gnm_740

GCGGCAGACAGAATGGCTCGAGGCGTTGCGACAGGCCCTGCTTGCATCTAAAAATCATTT
 10 CCTACGCACACGGCTTTATGCTGATCCGCGCAGCGGCCGAAAGCTACGGCTGGGATTGG
 CCTACGGCACCACATGCGCTGCTGTGGCGCAGGGGTGCATCATTCGCAGC

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 741>:

GNMMD20TF gnm_741

ATCCCCGAGGAATCTAGTCTGTCACTGCGGAACTTATCAGGTAAACGGTTTCTTGAG
 15 ATTTGGTCTCTGGATTCCCACTTTCTGTTGGGAATGACGCGATTAGAGTTCAAATTTAT
 TCTAAA

20 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 742>:

GNMMD36TF gnm_742

ATCCCCAAAATTTTTTGTAGTTTCTCAAAAGCGATATGATTAGACTGTTGAGAGGTGAAA
 GTAAAAACAACAGACTTTCAATGGCCGCAATTTGATGAATAGCAGCAAGCTGTAGCCTGCA
 25 TGAACCTTAAATCCATGCGTAAGGTGTGTGCTTCAGCACGCACGCGTTCCATGATTAC
 GGCTCAATGCCGTCTGAAAGCTCACATTTTTTCAGACGGCATTGTTATCTAAGCCAGT
 ATTCAGCTTCACTATATACCGCCA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 743>:

GNMMG74TF gnm_743

GCCAACTTTATCGTAACATATTCAAACTGATAGTTCCCGAACTCTCGATATCCGAAC
 30 TAAAAAGAGAAGAGCAGAGTAAGAGGCAATAGAGGAACAGTAAGAACAAAAATAGCA
 AAAATTTCAACTTAGTTAACAATAGTTACCTCTCCTTTAAATTCAATCCTGAAGGTACC
 CCTTACCCGGGGCAACCAATTATAGTTCCCATATTTCAAATATGGTTTTAACAATACTT
 TTTTCCCCCCCCAAGGGAATGCATTTTAAATCAGGCTTTTCAGGTGCAAAACCGATACTT
 35 ACCATTACCATCTTAAACCACAGATATATTCCAGGTATAGCCCAACSTGAAAAATCGGA
 GTATTATATACAGTT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 744>:

GNMMH29TR gnm_744

CGTATCGACATTTCCATTAACTCTCGGATTGCTCGCGGGACAGAGCAGTGACGATGGAGG
 AGCGAGCGAGATGCGCATCGTGCCTCAACAGATCTGCAACAACGCGATCGACCAACGCG
 ATTTGTCTCCGCCACGTCATACCGGCTGATCCAATCCGAAGAATACAGAGAGCATATC
 5 CTCCACCATCCGCACGAGTATAAGCTTGTGCTAAGGAAGGAACATTGGGAGGATATGT
 AACTACGCGCTTAGGAGCCATTGAACCTGACGGTGAATAAATCGAGAGGAAGCTTATTA
 GTGTTTAGAAGAGATGGTGAGGTCCAATCTAACTCAATTGATGGGTAAATTTGTTGTT
 TCTATTCCGAAGAAA

10 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 745>:

GNMMH29TF gnm_745

CGCAAGAACAGAAGTCATTGATGAGAACAGGTTTGTCGCGTGTAAAAATAACGAATTT
 TATGTAATAAATACTGGTATCTACATAGAGTATTATAAAACATGCGTGTGATTAATCTAC
 GTAGTAAGCAGCAAATTCAGTCAAAGAGAAACATCATCGACCATCTCTAGTGAATTA
 15 CTGAAAACCTGAAGAAATTTATCTCATCCCGAGTCAAAGTGAACCGTGGACTGTACTTGCT
 CATAAGAGCCTCAGAAGGACTGGAAGCTTCAACCCAAAGCAATGAGACCTCCCCCT
 CTACACAGAGGTACCAATGTGTGAAAGTTATGACTTGAATGTTAATGGACTGAGAGGA
 TTGTTGAAGTTTGAGAGCTTCTCTGCTCTGCAGCTTGCCCAAGAGAAATTTTGACATC
 TTGTGCTTGACAGAGACTAAACTCCAGGTCAAACTTAGACCCCTCTTAAGTTGTTTCT
 20 GCTCTATATTTTAAACACAGCCAATCTAGAAATCTCTTGTAACAGACATACGCAACT
 TATGACAGGTGAAGATGTTGAGGAATTAAGA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 746>:

GNMMH47TFB gnm_746

TTGCTGTTCAAGCTGTTTTTCAAGATTCTCGTAATATTCGTACATATAATAAGGGTCTTT
 GTACGGTTTTGAATGCGGTCTGTTCAATGAGCTTGAGCTTTCAAAAGGCGCAGTCGTA
 CGCTTCGGGAGCCAAAGACTTGGTCAGCTTGATGACTCTGCTCAATCAGTTCAAACAG
 25 TTTGGCTTTGTCCAATTCGGGAAAATGAATTCAGACCGTTTGCCGCACGCTCCGAAGT
 TTTTTTACCATTACAGTATCTGTGCGGTGAAATCGACTTATCTTCTCTTA

30

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 747>:

GNMNA66TR gnm_747

GGTAATGATGAATGATAGTTTTACAAAAGTTTCGGACTACAATTTATACGTTTATAATAA
 TAAACAATTCATCAAAAAATGTGATTTTTCTTTTTTAAAGTTGCATCTTGCCATTC
 35 TTGTAATCACATTGTAATATTAGCATTTTTTCAATCTGAATCAAAATAGATATTAGGT
 AAAACATTCCCTTCTTATCTAGTTCTA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 748>:

GNMND11TR gnm_748

GGCCGGGGACCCATGCTTTGGATGCGGTACAGCCGTCGCTTATGTTTTGGGGTTCGGAT
 ACGACAGCCTGAGGGGAAATGGGGCGCAACATTATGCTGACCTATTCAAAGGGAATAA
 40 ACCCTGACGAGCTTGCTTATCTGGCAGGCGATCAAAACGATATTGCAAAAAGAGCGT

-837-

CGTCTTCTTGGTCGACGGCAGACGTTTCCGCCTATCTGAATCTGAAAAACGGCTGACCT
 TGAGGGCGGCTATCTACAATATCGGCACTACCGCTACGTTACTTGGGAATCCTTGCGCC
 AGACTCGGGAAGCAGCGAAACCGCACGGCGCGACAGCAACTATGGAAGGTATGCCG
 CACCGGGCAGGAACCTCAGTCTCGCGCTTCGAAACCGGACGTTTCCGCGAGTGGAGCAT
 ATGGACGGCATAATCGTTTAAAAACGGTTTGGnGAAAGTGTGAAACCAATACGTCGCAAGG
 TnACGCAAGCTGTCGCGTTCT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 749>:

GNMNE46TF gnm_749

10 TATCTGAAAGTCGAGATTCTACATTCGCCGTTTCGCGGAATGACGAAAAGTGGTGGGA
 ATGACGGTTCAGTTGCTACGGTTACTGTCAGGTTTCGGTTATGTTGGAAATTTTCAGGAAAC
 TTATGAATCGTCATTCGCCGCGCAGGCGGGAATCTGGTATTCAATGCCTCAAGAATTTAT
 CGGAACAACCAAAACCCCTTCGCGCGTCATTCCCAGGAAAGTGGGAATCTAGAAATGAAA
 15 TGCAACATGAATTTATCGGAAATGACCGAAACTGAACGGACTGGATTCCCGCTTTTCGGG
 GAATGACGGGATTTAGGTTTCTGATTTGGTTTTCTGTTTTGAGGGAATGACGGGATG
 TAGGTTTTCTTAAGCCTGCGTCCTAGATTCCCGCTTTTCGCGGAATGACGGGATGTTGGGT
 TCGTGGGAATGACGTTGTGCAAGTTTCCGTGCGGATGGATTCTGCATTACGCGCACCGG
 GGAATCCAGACCTTATTGCAACAGCATTATTCAAACATTATCTGA

20 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 750>:

GNMNE50TF gnm_750

CCCTGCAATAAAAAGATTCCGTTTTTCAAATAATATCGAAACCTCGGCGTTTTTTTCCCA
 CTGTCGAACTCCAATAGACTTTTTGCGGAAGACCGTCGCGATCATAGCCGACCCAAAGA
 CTGTTCCGCTTCATCCCTCGGGGCATCACTCCCGCATCTCTGATAATCCACAGAAATTG
 25 CGCGAGTCCGACGAGTTCGGTTGCTCTCTTTGCGGAAGTCGCAACCTTCTGCTCGTCA
 TTCGCGACATC

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 751>:

GNMNE80TR gnm_751

30 CAGGTCAAAACCTTATTGCGTCTGGCTTTCGGAATCATGCTCCAGCAACGCAAGTCG
 CCACCGTGTTGGACTACTATCCGCGCTTCTTAGAAAAATTCGACCGCTTCAGACGCTTG
 CGCGCGCGCGCAAGACGAAGTGTGTCGTTGCGGCGGCTTGGGCTATTACAGCCGGG
 CGCGCAACCTGCACAAGCCGCGCAACAGTCGTACGCAATTCGCGGCACTTTCCGT
 CGGACGCAAAAGACTTGGAAACCTCTGCGGCGTAGGCAGAAGCACCGCCGCGCCATTT
 35 GCGCCTTCTCCTTCAACCGCGCGAAACCATTTTGACGGCAACGTCAAAACGCGGTAGC
 GTCCAAAGCGTAGTCGTCCAATGACGCGCAACGCTTTCGCTTCGAAACAGCCAAACCG
 AATCGCGCGCAAGCGCGCAGTGTCTTTAAACAGATAGGCAACGTCATTCGCGGCGCG
 ATTTTGTCTTTGTATCCACTTCCGCTTCGGCCAGCGAAGAACCCAGTCCAACAGAAAT
 TGAACCGGTTTTCGACCCCGGTAGAGATAGCCGATTGTAGATTTCCCGGAGCATACGC
 40 ACG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 752>:

GNMNMK53TFC gnm_752

GTGCGACTCATAGAGGATCCACGAATCTAGACCTTAGAACAACAGCAATATTCAAAGATTG
 GCGGATTGCGATTGAAGTGCAACTTTCCCTAACAGAAAAAGGCCAGTATGCGGTAGCAT
 5 ACGGCCTTTCTGCAAGAAAGATTGCCATGAGCTACACGCCAACTGACCCAAAGCGCAACGA
 TACCACATCCAATACCTGTCCGCGCACTGCACCGTCACCGAAATCGCCAAACAGCTGAAC
 CGCCACAAAAGCACCATCAGCCGCGAAATCAGACGGCACCGCACCCAAAGGGCAGCAATAC
 AGCGCCGAAAAAGCCAGCGGCAAGGCCAGACTATCAACAGCGTAAGCGCAACCCCTAT
 AAGCTCGATTGCGAGCTGATTGAGCACATCGACCCCTTATCCGCGCAAACTCAGTCCC
 10 GAACAAAGTATGCGCCTACCTGCGCAAAACACCAACAGATCAOGCTCCACCAAGCAGCATT
 TACCGCTACCTTCGCGCAAGCAAAAGCAACGGCAGCAGCTTGTGGCAACATCTCAGAATA
 TGCAGCAAAACCTTACCGCAACGCTACGGCAGCAGCATGGACAGAGGCAAGTACCCAAAC
 CGTGTGCGCATAGAAAACGACCCGCTATCGTCGACAGAAA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 753>:

15 GNMNL81TF gnm_753

GCGGGAATGACGGCAAGTGGCGCAATGACAGATCGGGCATTCTTTAAATTACCCGTGT
 ATCGCTGTAATCTTACAGATGGCGGCATATAGTGGATATCCGCAAAATCGGCGGGAAA
 CAGSGGTACCAAAATCCACTCAACGTCACGTCACACGACGCGTGGCAGCGCGACCC
 20 GCCTGTATTTCAAAAACGGTTTTGAAATCTGCGCATACCACTTCGTTGCGACCCCAAT
 GAAAACCCCTTCCCATCTGCACCTGTGCGCACTGCGCCGCTGCACCTTTCCGGACA
 AGGCGGCAGCAGGGTTTACGGGCAAAATCAAAAGCCGAGACCTTTGCGTTACCGCTCCTAT
 CCTGCTTTCTGCTTTCTGCTTGCCTGCTCTGTTGAGCGAAGCGTTCTTGCAAGCTCGC
 TTGCAGCTTGGCAAGCATTGCACTCTATCCGCTTTCTTTCTGTTGCGGCTGGTGGTTC
 25 AGGCTCGCGTTTACGCTTTGCACTAAAGCGACCGTGAATCGATGCTCGTATTATTTC
 TATCAATATT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 754>:

GNMNN48TR gnm_754

TTGGGAAGTTGTCGCTGTCGGACAGCTTTTGTGTCTGACCGTTATGTAGAAAGGCAAAA
 TGATAATGACCGCCCGTTGCGTTTGGAGAAAGAGGTAAGGCAGAAAGCATATGCGCT
 CTGAATGATATTTCAGACGGCATTTTATATTGCGCGGGCAGCTCAGTCCGTGTGCTTTCA
 GGCACCTCTGCCGAACCATGCGTTTGAGCACGATATTGGTTTGTGTCGGAGCGGTTTG
 30 CTTTTGCGATGGTCGCGCTAGTAGAGCGGGGCGGGGACGCGCGCCCTCAGTTTTGCGCC
 GTTCAAAAAGCCAATTCCGGCCACCCCGCGCGCCTATGGGTATGGCGAAATGGCGGAA
 ACATTGTGGACGAAATTCTCAATCACAACCCCGCCAACCCCAATTTACAACCGCGAC
 35 CGCTTCGTCTCTCCAACGGCCACGCTCTATGCTGTTGTACAGCTGCTGCACCTGACC
 GGCTACAACTAAGCATTGAAGACTTGA AAAAATTTCCGCCAACTGCACAGCAAAACCCC
 GGCCATCCCGAATACGGCTACACCGACGGCGTGGAAACCCAGCAGCGCCGCTTGGGGCA
 GGGATTGCCAACGCGGTGGGTATGGCATTGGCAGAAAAATCCTTGCGCGCGAATTTAAT
 40 AAAGACGGTTTGAACATCTGTCGATCATTACACCTACGCTCTTATGGGGCAGCGGTCTG
 ATGGAAGGGTATCGCACGAAGCCTGTTGCTCGCGGCAACTTTGGGCTTGGGCAAACTG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 755>:

GNMNMQ41TR gnm_755

45 AAAAGCGGGAGCTCCACCCGGTGGCGCGCGCTCTAGAATCTAGTGGATCCCCCGGGCTGC

AGGAATTCCGGCACGAGAAGGGGACTTATTACATTGGTACAGACATATTTATGCTTTCTTCCTCC
ATCACCACCACTAAACCCCTTTGGAGGAATGAAATAACTGCATAAACTAGTCAACTGAA
CACTGGGCCACTTACCTCAATGTTATACAAAGTCCCTGGATGATTTGATTCTGAACCAACAG
5 CTTTTCGAGGAGTTGGGGGAATCAGATTGCTCATGAAGACATCCCTTCCACTTTTGTC
ATGGGCAGTAAATACATATAGTTTACAATGCCTACCAATTAGCAAAGGATCATTTCATTAG
CTACTCAGTTCCTCTGTAAACAGGTCATGTATGTGCAATTCAGCTAAGATC

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 756>:

GNMNQ41TF gnm_756

10 TACGACTCACTATAGGGCGAATTGGGTACCGGGCCCCCCTCGAGTTTTTTTTTTTTTT
TTTTTTCTGTATTGAAACTTTATTACAAAATATAAAGCAGAGCTCTGTAAACAAAATAAT
ACACATTTTGGGTTTGCTTTAACTCCAAAGTAAGTCTGAGAAAATCTTAATAAAAGCCACT
TGAGTAAACAATTCACATCCAAGAGATTTCCACAAATTTATACAATGTATATTGAGCACT
15 AGTTCCTGTACAGCTTATTCTTATTAGTTTGGATCCAACATTTCCAATGTATTATGAACC
AGTCAGCTATCTGTCTTTGAAACAGTCTTAACTGAAATCTCAGAGTAATCAGCAAAAG
CTACGGAATAATTCTAAGAATTAGATGTTTCCATATCATTAACCACCAAGGATCCATGAGG
GGCAGAGGGGAGGATTCAAAGATTTAAAAAAATCAAATTTAGACCTTGGTTAAATATT
AACTGGAATGGGATCTTGGAACTCCCAACTTTAATTTGGTGAATAAAAAATG

20 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 757>:

gnm_757

TGTTTCCCTCTTGACAACGAGCTTAGCACCCGCTGTCTGTCTCCCGAGGAACCACTTGA
TGCTATTCTTAGTTGCCATGGGTTGGTAAGTTCGAATAACCCCTAGCCATAACAGTGC
25 TTTACCCCACTCAGTGTCTTGCTCGAGGCACACTCACTAAATAGTTTTGGGGAGAACCAAGCT
ATCTCCGAGTTTGTGTTAGCCTTTCACCCCTATCCACAGCTCATCCCGCATTTTGGCAACA
TGCCTGGGTTTCGGTCTCCAGTACCTGTTACGGCACCTTCAACCTGGCCATGGATAGATC
ACTCGGTTTCGGGTCTACACCCAGCACTCATCGCCCTATTAAAGACTCGGTTTCCCTACG
CCTCCCTATTTCGGTTAAGCTCGCT

30 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 758>:

GNMNR06TF gnm_758

GCTCGGGCTCATGGAACGAAATACATCGTATCTGCACTCAAATATCGCCCCGATTCTTTT
GCCTCGATGGTTCGGTCAGGAGGCATTGTCGCTACACTCAAAGCTCCATCGTACAGCAA
AAGACAGCTCACGCCATCTCTTTTGGCCCCGCTGGGGTGGGAAAGACCTCTTGTCGA
35 CGCATCTTTCGCCCTGCCATCACTGTCTGAGAGCGGTTCCCGATGGAGAAGCTTGTGGG
CGATGCGAGTCGTGCAAGGCTTTTCGATGAGCAGCGATCCATGAATATATGAACTGGAT
CCGCCCTTCGAACAAATTCGGTAGATGATATTCGTCTCTGTATAGAGCAGGCCAATGTGGC
CCACAGATCGGGAAATACAGGCTACATCATCTACAAGGTACAAGTACAAATGCTC

40 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 759>:

GNMNR07TF gnm_759

GAATCAATGGAGAAAGTTTGATCCGATGAGATAACGGTCTGCAATCGAAAAGTCTGAGC
CTTTCATAAATTCATCTGTGCTCTTCGATGGAAGTTATTACAGGTTTCAATATGCGC

-840-

AGTGCTGTACGCAACCGGAGATTAGCAAGATAGAGCATCCTCTTATCTCTCGAAAACTG
 ACCATACGCCGCGGACGGTTACCTCCTCAGCACCCAAAGGCTGTAGTTCGGCAGCCAAAG
 ACATCTCCCAACCCATAAAGGGTCTTAGCTACCATAGTAAATTGGAGATCGTTATTTCATA
 ATAGTCCATGATTATGGAACAAAGATAATGAAATACGGCCGAGTTATGGCTTTTGTAG
 5 ACCTGTACGGAAGTGTGTAGATTCCAGCTATCAAGGCTCGCATTTTCAGCCACTAAGGTAC
 ATCTAAAGCTCATGATGCTACGCTCGGTTATCAACAAGTACGAATCCATATATCAGAGA
 TTCAAT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 760>:

10 GNMR12TF gnm_760

GTACTGCTTATAGAGATGGCTTCTGTTTTCGTATAGCCCCCTGGATGGCAACGATACGG
 TCTTTAATGCTTCTCTGCTTGGAGCGGCTCTCTTGAGCTATTGCTACCATATACCAAAG
 ACGAAGCGTATCGCACGCTTGGCGGCCAAACGATCTCAGCTTGCTGTGCTGCACAAGCCG
 AAGATGGTTTCGTGGGTCTATGGGATGCTACCCGTGCAGTCATGGATTGATAGCTTCCATA
 15 CCGGCTACCAATTTGGATGCACGTGATTGCCTATCAAGAGCTAACGGnGGACATTTCCCTTTG
 CCGAGAATATAGAGCGTGGGTTGTCTATTACTTAGAGCATTTCTTCGAGGCAGATGGTA
 TGCCCAAGTATTATCAGCATCGTACTTATCCAATCGACATTCATTGTGCTGGTCAGCTCT
 TCGTGTCGTAGCTAGACTTCATCG

20 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 761>:

GNMR14TF gnm_761

GGAGCGGGCGCAGTTCCTCCCTCGCTGGACGAAAATAGCATGAACCACTCTCGGAAAA
 CAGCCTGAACGAAGAGATCGAATGCTTTGGGACGGCTCTTCGGATTGGGCAGAGGCACT
 GACCAAGAGGATCCGCCATCAGGATCGCTCCCTCATCTGATGCTTCGTTTATTCGAGGA
 25 GATGGATCTGCTCAAGGGTATACGCTTTCGTGTCGATTGGGTGAAACGAGCTGGATTTC
 TTACTCCAAAAGGTAGGCGGAATGGTGAATACGATCGCAGCATACCGGATCATGCCTT
 GGCATTCCGCAAGCTGTACAGCTTCCAGAATGAAGAAGAGGTAACTAAGATACGATGG
 AGAAGCGTCTTATCCCGTACGCTTCTCTCTTTGCTCCCGCTATGCCATATACGACAA
 TAAGATAGG

30

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 762>:

GNMR20TF gnm_762

GAAATACAGCCTTTTCGTTTTTACCGGTCAAAAATAAATCTTCTGAATACTGTCCCAT
 ATCATATTGTTAATGGTCAAATATAATGAAGAATGTTTTGAAACCAATATGAAGTGT
 35 TGCAATGGGAGTTTCATTGAGCTCTTTGCTGCAGAGCAGATTCTTAGTGTCTTCGGGAAA
 GGTCAAACCTCCGGTATATGGGCACACCAAGCAACAGAAATTTCCCAAAGTTCCATATA
 GAGAAGTACTCCTTTCTCGTCAAAATAGGCGAGAAATAAGAAACGATTGTACAGCTGATTC
 TTGCTTCTGTCATGATGCAGGACGCGATTGTACAGTGATTCTGCTTCTGACAGATGCA
 AGACGCGATTGTCACTGATTCTTGCTTCTGACAGATGCAAGACGCGATTGTACAGCTGA
 40 TTCTTGCTTCTGACAGATGCAAGACGCGATTGTACAGTGATTCT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 763>:

gnm_763

ATTCAGAGTACTTAACACGGTTTTAAATGTACCTTTTATTGGGTGGCAGCTCTTG
 TTGATTCTAGTTGTTGTACGATGGATTTTAGTACACAAATAAATTCGTATAGGCTTACT
 CAACAGTATGATAAGTTAATGACTCGTTCAGAAATGAAATCATTTCTCGGAAATAGAAT
 5 TATGGCGAAAGAAGTACTATCCAAATGCAAGGTGAAATTCCTGAAACCTTTACCTAATGC
 AACATTTAAAGTAAACTTGAAGATGACCATATTGTATTGGGTATATTCTCGGGAAGAT
 GCGGATGCATTACATTCTGATTTCTCGGGAGATAAGGTCACAGTAGAGCTGACACCTTA
 TGATCTAACTAGGGCTCGAATCGTTTTAGAGCAAGATAAACCAATAAAGGAAAAATAA
 ATGCGTGTACAACCATCTGTTAAGAAAAATTGCCGAAATTCGAAGATTATTCTCGTGAAT
 10 CTGTAGTATCGTGAATTTGACTGATCTCGGTACAAACAGCGTCAGGTTAATGGAAT
 ATTTCTGTAATGTGATTCTGTGATATAGTGACACACTTTGCCCTAAAAAGGAAAAATA
 TGGCTCGTATTGAGGGGTAATATCCCTAATAACGCACACATCGTAATTGGTCTTCAGG
 CTATTTACGGTATTGGTCTACTCTGCTAAATTGATTGTGAGGCTGCAATATTGCGC
 CTGATTACAAAGCCCAACATCTTTTGAGCAACAGAGCCCGTGTATAGCCACAGCTGTGTA
 15 TGGTTAAATTTGCCCCAGAATCAGAAAGAAGAGCGTACATTTTGGAGAGCAGTCGACCT
 CTAAGATTTTCAGGAAGACGCTTTTGTATTGTTGCGAAAACTTCTAACAAATGGAACA
 TCCCACATAATATGTCAACGTGTTCCCATTTGATTCAAATTAATAGGGTAGCTTTGGG
 GAATAGGCCATTGGAATAAAAGTATGCTCCTTAGATTGGGATTGTGTGCCGGG

20 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 764>:

GNMNS04TF gnm_764

ACACATGATGTTACCGGGCATCTTGCTCCAGTTATAGTCTCACCGAATGTGCCGTAATAG
 TGGGTATGCGTCCCCGTCATATCATCGTAGTAGTCATATTCGCCGGAAGCCTCTCCGGC
 CACTTGTAGTGACGCATGATTTGTCCTATGGCAGTGGCAACACAAACCGGTATAAGCCTGC
 25 TGCCCGGAAGGAAGCAGGGGATGCAAGGTGTTAATGGATAGCCCTGATCCCAAGATC
 GGATCCGATGCATGTTGCCCGTTTCCAAAATAGGGGCAATGGATGATGGCAGCTCCCGT
 GTAGGCTTGCTTCACGGATAGGATCTATCGGCTCTGCCTTGCCCTCCATTACAGCAGGC
 ATTTACAGCTTCATAACCTTTTGTCACCCTCTGATATTGTCCGGTATACGGGCCG

30 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 765>:

GNMNS06TF gnm_765

GAAAGAGAGCTTCAATGCGATCTCTGCAAACTCAAGTAATCGAAAAACACTTAAGA
 ATCAGCTCTGCGGCAAAAGACTTCAATGAAAGTCTATAAAATAGTTGCAAAATAGCTGAT
 AGTTAGCGCATTTGATGGGAGCAGAATCAGCTGCACATCGCGTCTGATCGTGCAGGGAG
 35 CAAGAATCAGCTGACAAATCGCGTCTGTCATCGTGCAGGGAGCAAGAATCAGCGGCAATC
 CGCTCTGATCGTGCAGGGAGCAAGAATCAGCTGACAAATCGCGTCTGATCGTGCAGG
 GAGCAAGAATCAGCTGACAAATCGCGTCTGTCATCGTGCAGGGAGCAAGAATCAGCTGAC
 ATCGCTCTGATCGTGCAGGAGCAAGAATCAGCTGACAAATCGCGTCTGATCGTGC
 AGGAAGCAAGAATCAGTTGACAAATCGCGTCC

40

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 766>:

GNMNS08TF gnm_766

CACTTTCATATACATACCCGTTAAATAAGTTAAGAGGGAATATGAAAGTGTACTA
 ACAAGCAGGCCCTCATCGGCCTGCTTTTCTTAGTATAAGTATATATCTCCCATCGGGCC
 45 AACCCTCGGCCCCAACCTACCGACACCATCGTATCGGCAATATCGCACTTGAGGATATA

GTGGTGACCCGGTAGCCGTACAGCCCGCTGCTTAAAGATGTACCTGTCCCCACAAAGTG
 TTCAGGCCCAAAGATATCAAAGCTATAGCCCCATCTTCTTCATTGACGTACTGCAGTAT
 ATCTCTCCCGGGATCGAGTTTACCAAGCATGGTTCAGAGATCAGCTCAATGCTCAGGGA
 TTTGACGAAGTCTTATCTCTCTCGTCGATGCGCGAATTGATTTCACGGGATCTACC
 5 AGTGGAATAGACTTCGAACGAATCAATCCGGATGACATCGAGCGAATCGAAGTGCTTCGT
 GGAGCTCTCTGCTTTGTACGATCTAATGCCATCGG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 767>:

GNMNS13TF gnm_767

10 GAATGGAGCAATGAAAAGCGATTCTCTGGCAATGCCAAATGCATCTCAATTTGGACG
 AATGCAGGAATGAGTTACTTGTACCTGTTTAAAGTGCTGAGATACAAATGCAGGTTAAAG
 AGCTGTTTGAATTATCCATGCAAAAGTCGACAGAGGGAATATCCCTCTACTCCTCTGCTG
 AGAGCTATCTATTGGCGTGCTTAGGGATGCAAGACTTTGTAGCCAAATATAGATGCTTACA
 ACCTAAAGACACTCAAAGAGAGCTTCCTTGAAAGTGGACGATTGATGCAGAGTATTATT
 15 TGCTTAAGTATGAGGATTACATCAATGCAGTATCGGCATACACTGGCGGTGTCGCTCCTC
 TTGGTGAGGCTCTGCACCATTAAGACAGCAACTATACGCCAGAATGTGATATGAAGTATC
 GCTACATTGAGTTGGCTAATATTGGCAAGTCGGGCGACATTACAGGCTGTTTGTACGAAA
 ATGGTGAAGACCTGCCACACGTCGAAGCGTATCGTAACCCAAAGCGATGTTATTGTTT
 CATCTATAGAGGGGCTTTGA

20

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 768>:

GNMNS15TF gnm_768

ATCGAGTGGTTGCAGGTGGAATACACGTTTCGCCCTCTGTTGGAATGGATTGCAGGTTG
 TCCTGATGGTGTTTGGTTGCTGTTTCATGACGGGGTACGTCCTTTGGTCAGTGCTGAAA
 25 CTATCGATGCTGTTTTCGATCTTGACAGATTGAAGGGGGCTGTCGCTCCTTGTGCGCCTA
 TGACCGAATCGCTTCGCTATTATGCCACTGATGGCAATTATGCAGTGGACAGGAGTCGCT
 ACCTCAGGTTACAACTCCACAGACCTTTCGGAGCGAATGGCTTCGAGAGGCTCATCGGC
 AACCTATGAAGAGTATTTTACCGATGATTGTTGCGGTATATGAACACCAATTTTGGCGCAG
 CGGTGGCATTGATTGTCGGTAATATCGAAAATATCAAAATGACTACTCCTCTCGATCTAT
 30 CCCTTGCCAACTGTTATTGACATCCTAATACCTAAAACATAAGTTACATCTCCACAT
 GTTGGAGAAGATACAAGACAACTTAATCGAAGACCTCGAAAAGGGCTAGGGCACTAACG
 CCATGCCAAGTTTTAGAACTAACTAGCTACTCAA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 769>:

GNMNS17TF gnm_769

GGCGTTTCATCATCTCATGTGCCCTCGATGTAAGCAGAGTGATATACCACCCCTGCTTAT
 TGCAAACCTCCAGCTCGTCTCCAGCAAGAGGGAAGGGTTGGGGCGAAATCATTCATTTC
 GATCCGAATTCTGTTTGGGAAAGTTTTTTCGGCTCTTATCTCCGACCAACGCCATACAA
 40 AGGCCACGGCTACGGTCACACGAAACCTGTGGCAAGCGGAATCAAGGCTGCCAGCAGG
 TCCATTTCGGGCTCCCGCTCTCTTTATATATGTTAAACAGGTTGGTCTGCAAGGATTGT
 GGAGTAGCAGAACAGCATGAGATTGATACCTGTGAGCATAGTCCAACGCCGGCTTCGA
 ACAGTCGTGCCGTTTCGGCTGTGCCATCGGCTTCGAACATGACCGCGCACCGGTTCTCT
 CATCTATTCCCGTAGTCAGGACAGTCAGCATCAGTATCGTCCGTATCACTATTTTCATTGG
 CGGGAATGGCCAAATACATAGGCCAGAGATGACACCGTTGAGTCCCATCAGCCACCGG
 45 GTCGCTCCAGCAGGTGATCAGATATTTCGGCTATCCGACTCCACCGATTGGATGTTGC

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 770>:

GNMNS19TF gnm_770

5 GACGGACGTATCATTTCATAGGCCCCCTGCTAACGGAGCAGGAAGACTTACCCACCGAT
TTTGAGAATACAGTCCCTGCCATCTTGGAGGACTGGCATTCTGATGCAGCACCCCTCGCTG
GACTTGGCATATGTGTGGCAGCTGGCGAATCCCGTTCTCCCTCTGTAGTACTGGTG
GACTTCGAACCCCTCCATGCACAGAAAGCAACGCTCTACTATGAGATGTGGGAGCACTTC
10 GGCATCCAAAGCGACAAAGGGGTACGGGCACTATGACGAGGCCCTCGCTCTCTGGGATTGGC
GCAGCCCAAACGATGCATAGCCTGTGTGAATACCTCTGCCCGGAAGACCAACCGGCCATA
GGTATATTCAACGAATGGATGCTCGGCATGGGACTCCTCTACGCAAGCGGAAAAACACT
CGTCTGAAAACCCCTTTTCTCACACATGCCACCAACAGGGCGGTCTATCGCCGGCAAT
AACAAAGCTCTGTATGCCCTACATGCCGGGCTACAAAGCGGCTCAATGGCTGCCGCAACT
GGTGTAGAAGCCAAACACGGGATAGAAAAAGCGGGCTCAACCATCGGACACC

15 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 771>:

GNMNS23TF gnm_771

GACTTCACGGTTGTTTTCGAAGAAACGCCTAACGGAATAAATAGGGCGGAGCAAGATT
GGTCTTTCCACGGAAGCCAATGGCGCCAAACCTCAAAGTGTATGGATCGAGCGTACGGTA
20 GATTTCCTGCAGGCAGCAAGTATGTTGCTTTCCGCTCACTACAATGCTCGGATTTGAAC
TACATTCTTTTGGATGATATTCAGTTCAACATGGGTGGCAGCCCCACCCCGACCGATTAT
ACCTACACGGTGATCTGATGGTACGAAGATCAAGGAAGTTTGACCGAAGCACTTC
GAAGAAGACGGGTAGCTACGGGCAATCATGAGTATTGCGTGGAAAGTGAAGTACACAGCC
GGCGTATCTCCGAAGAATGTGTAACGTAAGTCTTAATTGCACAGTTCATCTCTGTA
35 CAGAACCCTGACGGCAGAACAGCTCCTAACAGCATGGATGCAATCCTTAATGGAATGCA
CCGGCATCTAAACGTGCGGAAGTTCTGAACGAAGACTTCGAAATGGTATCTCTG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 772>:

GNMNS25TF gnm_772

30 GGCCGATAGATTCTGCGGATGAATAAGACCGAGTGCCTTTCGCGAATTTGCGGTAATGC
CCATTCCCAGCAATTTCCACGGCACCATTTCGGCCATGTCACAGCGGCATCCATCGATTCC
TTTGCTTGCCCAAAGAGCAGAATATCTCGCATCCGAATCCACGTGTCGGTAGAGGATC
GAAGTGTGTTGCTTCTCCATTCAGGTACACGATGCCGTACTTCAATTTACACCGTTTCGTA
CCAATCCTCCTTATCGAT

35 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 773>:

GNMNS28TF gnm_773

40 GAGTAAGAACAACCGGTCGAGTAGCTGCTGCCCACTATCCGGGCGGCTAAAAAGCAGATC
GGTCAGTTTCATCGCCCAAAAGTCTTTCTCCGTACGTAGTACTGCTTGGGTACCTCCCT
ATTCAGAGGAGATCACGCGAATGATGTGTAATAAGGGAGTGAGAAGAACAATGAG
CAAGTCAAGAACAGCATCTGTCCGAAATGAGGAACCTTTTGAATAAGACGGATTCTTGC
CTGTACCCCTGATCCACTTCTCGACAAAAATGGAATGGCACTTTGAGAGAGAGGGATAGC
CCATAGTCACATTGATACGTCTTACAGTCTCGGCCAGACTGTTCAATACGGGCATCAACA
TTCTGTATCGGGAAGAATGATAGCTGTTCTATTCTTCTTTGGTCAGAATAGCCTTCA

GGGTATAACTCCTCGA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 774>:

GNMNS30TF gnm_774

- 5 CACTTTCAACTACTCAATTCATTCTGGCCTGGCTGTTGATCTTTTTGGGTATTGCTCTGTT
TGGACGGTTGGGGCTGCTGCTGTCCGCCCTGGTTATTGTTATTCGGATTGTTTTGCCGTT
GTTTTTTGTCGTGATTACTCTOCTTATTCTGATCCTGATTGTCCTCCTCCTGCTGTT
GCTGTTTTCTGAAGCAACTCATGGTCAAAGCCAGATTGTAACGAGTCTCTTCATCGGTG
GGTTGATTTCGGAGCGAATGCTTATAGGCTCCACACTGCGGATAGTCTTTCTTTTCA
10 TAAAGGAGTTGCCGAGATTGTGCATCAGTTCCGGCTCTACGCTTAGGTGTCAATGTCGGGT
CTGTGTACAAGAGCAGCATAGTTTGGAGAGCTTCATCGGTGCGGCCCTGTGCATACGTG
TACCGGCCAAACCGAATCGTGCTCGGTGAAAGTACTGTCCTGGAGAGAGCTTTGCGAT
ATGCGACCTCGGCATTGGCATATTGATGGCGTCGATATACT

- 15 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 775>:

GNMNS34TF gnm_775

- GGGACTGCTTTCCGACTTGAAAAAGAAAGCAAAGAGGATGGCGATGACCAATGCATAAGC
TCCGAAARTATACCATACCGTGCTCCAAAGCCGATGACCGGCATCCGTAAAGCGATCTAC
CACCACAACCGCTGGCAAATCCGCCGATGATAGCTCCGATACCATTTGGTCATTATCATAAA
20 AAGGCCCTTGAGCAGCTGCCGAATCGATGGTGTAGTCTCTCGATCGACAAACATGGAAACC
GCTGATATTGAAGAAATCGAAGGCCATACCATATACGATCATCGACAGAACGAGGAAAAAT
GAAGCCGCTACCCGGATTGCCGAGACCAAAGAAAGCGAAACGCAACCCAAAGCCAACT
ACTCATAGCATCACCCGTTTGATCCGAAAGCGCCCATGAAAAACGGAATGGTCAAAAT
GAAAAGAGTCTCGGAAATCTCGCACAAGAAAGCAACACATTGGGGTGCTGAACGGCAAA
25 GCTCTCGCTATAAGCATCCGCAAAATGAGACAAAACGGGATTGCCGAATGTATTGGTG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 776>:

GNMNS37TF gnm_776

- GTCTCGGCAGGTATGCCAACAGGATTGCCCGGGTTCTTTCTCCATAGACGGCAGATGC
TACAGCCTGCCGATCAACAATGGGCCGAACCTCTCGATGGCGGCATCAGCGGATTTAAT
30 ACGAAGGTCTGGGAGGTGAAATCCGCCGGCCCTCTTCGCTTGTGCTGGAATACGTGTCG
CGAGATGGAGAGGAGGGGTATCCGGCGAGCTGGTCGTTTCGGATCATTTACAGCGTCACG
GATGAGGGCGCATTTGCACATAGACTATCGTGCTACTGCGGATGCTCCTACGGTTCTGAAT
35 CTGACCAATCACTCCTATTTCATCTCTCGGGTGACGGCGATCCCTCCGTCATGATCAT
ACCCTCATGATACAAGCCCGGCATTATCTCCCAACAGAGATACGGGCCATCCCTTACGCC
GAGCCTCGCAGSTCGAGGGGACGCCCTTCGATTTCCCTCACGCCCTACGGCATAGGGGAT
CGGATCGACAGTGCATGGATCAGCTCATTGGGCAAGGGGATA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 777>:

GNMNS39TF gnm_777

- CTCTCCTATCGTCAGTCCATGAAGAATAGGCAGCGGATCCACTCCGACAAACGAACGGCA
ATCATCTTGTAAGATGGGACCATCCAGTAGTCTCGGGTTCCGGGTCGGCCGATCAGTAACGAT
CAGCTTTTCTGCTCTCGGCACAAGCCTCCATCACATAGTGCAGCGCTACTGATATAAGT

AAAGAAGCGAGTCCGGRACCTCTGCATATCGAATAGCAGCACATCGACGTCGGCCAACAT
TCGAGGAGTAGGTTTCTTGTGTTTTCGCCGTAGAGCGAAGCAGATAGGGATTCCCGCTCCTGAC
ATCCCGTTTCATCCTTGACCGTTGCCCGCGCATCGGCATCTCCACGGCAGACGCTTTCAGG
ACCTAGGATCTTGACACATTGCATCACTGCCGAGGCA

5

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 778>:

gnm_778

CCCCCGCTTCTCTACATAAAATTACATTTTGGCGATATTGCGCAATTGCTGTAAAAAT
ATGTGTAATAAGGGGCGTATAATCAAAACATTGGCCCGGATTGCCATGCCTTATTTCCG
10 CCGTGTGACGATGCGCTAGCGGCGCGCAAAACGCTATCAAAATCATGTGGAAGACCG
TTTTTCCGTCCCGAAGAACTCGATGCTTTGGACGGCGCGCTGCAATCGGGCTGGCAAAA
AGGGCTGCATTCGGTGTGTTTTCGACACTACGGATTTCGGTTTGGCGCTGACGGGGGTGA
GTCCGAACGCGGGCGGCAATCTTGCCTGCACTGGTTTGCCAACTGCGCGACATCGATGC
CGAAAGCYGGCTTGCCCGACACTCAGATAGCCTCATGCGTGGGCGCATCGACATGCATGAG
15 TTAAGCGTATCGCTAGCGTTTCATCCTGAGCCAGGATCAAACTCTCCACTGTCTATTTGT
GTTTGTGCTTCTGTTTTCCTCGCTCAGACGCGGATTATTACCTTTGGATAATTCGAT
TTATCAGGTAGTACACCTCGGTTCTTTTTCTCTCGGCTTTTCGTTTTCTCTTTG
ACAAAG

20 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 779>:

GNMNS42TF gnm_779

GCTGGTTCAGGCTCTCGCCATTGACCAATATTCCTCACTGCTGCCTCCGCTAGGAGTCT
GGTCCGTGCTCAGTACCACTGTGGGGGATAAACCTCTCAGTTCCCTACCCATCGTCGC
25 CTTGGTGAGCCGTACCTCACCAACAGCTAATGGGACGATGCCATCTTACAGCTATA
AATATTTCTTGTAAATATCATGCAATAATAAAGTGATGCGGTTTAGTCCGCTTTTCA
GCCGTTATCCCCCT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 780>:

GNMNS49TF gnm_780

GCCGACTGCCACGGTGCCGGCTGTCGGGTGACGATCGGCCGGGCGGAAGTCGGGATGCCA
30 GTCGGCTTCGTGTATCTTCTGCGCATGCCTTCGAACTCGCCTTTGCGGATCTTGGCCAG
GTTTTACGGTGGGAGCGGTAGCCGATTCTCATAGAGGAATACGGGACGCGCTACTT
CTCGCCTATCGTGCAGCCTACCTCCTTGCGCAGGGTGTCGCGCTCTTCGGCAGTCACATT
35 CTTGATGGGGATAAAGGGGATCAGCTCCACTGCGGCCATACGGGCTGACACCGGTG
TTTGGTCAGGTGCGATCAGCTCTACGGCTATGCCAACGGCTTCGAGCACTGCCTCCCGAAG
GGGCTCGGTTTCGCCACTACGCTACGACGAGACGGTTG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 781>:

GNMNS51TF gnm_781

CCCTTCGTGAGGAAAAGACCGGTGGATTCCACTACGTATTCCTACTCGACTTGATCCCAT
40 TTCAGATCGGCAGGGTCTTCTCAGCTGTAACTCGAATGGCTTTCGGCTTTACTATCAGT
TGACCATCTTTGACTTCGACTGCCATTGAAACGACCGGTGACACTGTCGTACTTGAGC
ATGTACGCCATATATTCCACATCGATCAGGTGCTTGATGGCTACAATTTCAATGTCGCTT

CTGTTTTGTGTTTGTGCTGCGCGGAATACCAAGCGGCCGATACGCCCAAGCCGTTAATA
CCTACTTTCGTCATAACTAAGTGCTTATATTTTAAATGTTAACCATTATTGTTTTGTCCGG
AATACTTTGCTTTTCCCGCGAAAGGATCCGCAGAGATTCTTCCCGATAGACAGCGTTC
CAATGACCTTGCT

5

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 782>:

GNMNS53TF gnm_782

10 TAAATGGATGACCCGGCTTTTTGTTCGGTGGTGTATTTCTCATCGGTTTCAAACAAGA
AGAAAGAGTCCGACTCTCTATTTACTTGTATGGATTGAGAGAAAAATCAGAGAAGGCCTT
CGTCAGCGAAACTGAAATATGCCCATCGTCACCGATGATCAGATGGTCGTTCAAGTCGAA
ATCCGAGCAATGTGGCAGCGCTTTGCACCCCTTGAAGAAGCTGAATATCCTGTTCACTTG
GGCGTACCGTTCCTGAAGGATGATTGTGTGCCAGAATGATTGCCGAGGCAAGATGAGAGA
CGGCTTTGTGATGATCAGACGGACATCGGnCGAAGTCTCCGATACACCTCCTCGGCTAA
AGGTTCTCATGCTG

15

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 783>:

GNMNS55TF gnm_783

20 GTACTTCGAAGAAGCATCCGGCGGCAGATCTTTCTGGACGAAGTGGGCGAACTGCCTTT
GCCACGCGAGGCGAGGCTGCTGAGGGTCTGGAGACGGGCGAGTTTATCCCCGTAGGAGC
CAGCCAGTTCGAGAAGACGGATGTCGATATCGTAGCGGCGACGAATGTGAACCTCAAGGA
GGCGGTAGCGAAACGGGAAGTTCGGGAAGACCTCTTCTCCGGCTCAATACGATACCGAT
CGAGGTGCTTGCCTGCGTATGCGACCGGACGACGTGCCCTTGCTTTTTCGCCGATTGCG
CGCCGACAGCGCCGAGAAGTATCGGATGCTCTGCTGCGCTATCCGACGAAGCCGTACC
ATATTAATGCGTTACCGCTGGCCCGCAATGTGGACAGCTGC

25

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 784>:

GNMNS57TF gnm_784

30 GCCATTGTGGACGAACCTACCGGCTTGCCGGTATCTATAATACCTGTATTATCTGTGTA
CTCCATTTTGTCCGAAACGGGATTAAGTGCSTGGGCATATCGGTTCCGGAACCTCAGCGC
AAGTCGGCGGCCATCCTCTCCATAGAGAAAGATGAGAATCCGGCTTTGTCCGTCGTAAAA
GCACCTAAAGTAAGGGATGGAAGCCCGTTGGATGTACCTTTGATGCTGTTCCGATGGGAC
AGGGAAGAGAAATGCACGTTTACCGGGGAGAGAAATCTCCGGAAGCAnAGAAAACCGG
AAACTTACGGAATTGGGACAAATCGCAnAAGAAGTCTTTCACGCGnCAAGAGCATTTATCT
TACAAACGAACGGTGAAGAATCATGCAnACGGTCGACGTCAAAGACCGTACGGCCAAAG
35 AGTTATATCAGTTATATGCCA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 785>:

GNMNS59TF gnm_785

40 CBTGCATATGTGTCGGGAACCGCTTGCGTCATACCCCCGAACGATACAGCATCTTGAA
GTCCGATATAATCTGAAGAAGATATTACGCGCGGACGACTTGTTCGATCTCACTCGCGAG
AATGGCTTGCGCTGAAGTCTTCTACGGTCTATAATACCCCTTACCTTGCTCGAACGCTGC
GGGATCGTTCTGCGTTTGCTTCTCCGAAACCAATATCAGTACTTGTAGGACTTCAATTC
GCAGAGCAGTGTCCGCTGCTTTCTGTACCGAATGTGCACAAATTTCTACCTACTACCGA

CGAAATGTGAAGTCGATACTGGCCGACAAGGATCTCAGACCACACGCTTCTCTTATAGG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 786>:

GNMNS63TF gnm_786

5 GCACACCTCCTGCGGATAAGCCTTGATTATCGCCTGACGGATTTTTCCGGATCGAAGC
ACTGCACATGACCATCAGCCTTTACGATGCGAAGGATTACCTCTCCATTGTAATACGTT
ATTGTAAAAAATACTTCTGAGATCTATTCTCTTAGTGCCGGGGAGACTCCTTTCTCTCG
AGGTCTTCTCTCCATACTTTATAGGCAACTCGTAGAGGCAGGTATTCTGGCTTACTTTCAT
10 CTCTTTTCTGTTTGTGCGCCTTCCATTGAGTCCACCTCTAATAGTGGAGAATGAACA
GTGGCATCATTTGAAAGCGACAAGAGTCCGCATGTCAA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 787>:

GNMNS65TF gnm_787

GTAGGCAGGGGGATCCCCCTCAAATCCCCAAAGCTTTGATTGGAGCGACTCAGCTCTCA
15 TACTAAAAAATCCCCCTCTAAGCAAAACATTTAGGACACTATTGATTGATAGCGGTTTT
TCTATACAAACGATGATCCGGCCCCCTGCTTGAAACTGAATTTGACACACCCCTCTTCT
GGTAGTTGGGGTTAATTTAGGCCCTTCCGTTTTTTCTGCGGAAAGGTTGCCGCTTTAAAC
CATAAAGAGATGAGACTTTATTGAAAGAGCATATCGGACGAGATCGGCTTGAACCTTTTCT
20 TCTCCCTTGAGCCGTATCATTACCCTGCTGTAGTTCCAATAAGTAnGCCAGGCACCTTGT
ATGGCTCCGACCAT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 788>:

GNMNS71TF gnm_788

GTATGGTTTGAGTGACTACGAGSTTGAGGAGTCATCAACGACTCCTTGCTTTTCACTGA
25 ATTCCTTGGCTTGGACCTCGGCTTCCCTTCCCCGACCATAGCAGCATCAGTCCTTTCCG
TAGTGAACCTACTCGCTTGGGGATTATGGATAAACTCCTTCGGGAGCTGAACAGCAGTT
CAAGAAGCACGGCATCAGCCGTATCGATCAAGGCGCCATCGTTGATGCGAGCATTTGTGA
TAGTCCCTACGCCCCCTGATGGCAACCTGGTCATAGAAGTGGCTGAAGATCGAGAGGATAC
30 TCGTTCCGAGGAAGCTCGTACACAGCCAGGAGGCTTATCATTGTGAACCTCAAGAGTGGCA
AACCAGGAGTAGACTCGGAGGCTCGTTGGGTACGCAAAAGCAGGCACCTATCGGTATGGAT
ACAAGAAGCACGCTCTTGA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 789>:

GNMNS73TF gnm_789

35 GTTTTGGAAATATAATATCGAAGTCCGGACAGAATAGTCCGTTTTACCTTCTGTATCGG
CATAGCATCATCTCTCTCACCCGATCGATACGTACATCGAGGTACTGCAAGAGTAGCAA
ATTGCTGAATACTTCACTTATGGGATTATATATGCTCGATCCGATAAGCAGAGAAGACTAA
ATAAGTGAATAGATCAATTGTTCCCTTCTGACAAGAGATAAGCTCCCATTATGATTACAGA
40 GCGAAGTCCAGTTTGGAGATTATATGTGAAG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 790>:

GNMNS77TF gnm_790

GCTCACAGCTCTATGAGATGGAGCTACAGCGCCGACGAGCTGCAGAGGCCAAAGTGGAGG
 CCGGCAAGAAAAAGATAGAGTGGGGATCGCAGATTCGGAGCTATGTA⁵TTTCGATGATCGCC
 GTGTGAAGACCATCGTACCACTATCAGACGAGCAATGTCAATGCCSTTATGGATGGCG
 ACATAGATGAATTTATCAAGGCTTATCTGATGGAATTTGCCGGTGAAGAGGCGTAATCGA
 CTTTCGCTTCTGAAGGAAGGATTCTGTTGATCAAAGGAAATGGGGCAGGCTTGTATTGGC
 AGTCGGCCCATTTCTTTTGTGGGAAGTCCGGAATGTGCGCCGGTTATCGGCTCATAT
 ACAATTATACGCAGGGTTATTGTATCTCATGTCTTTCGGGTAGTAGGCATATATTCTCT
 GCTACAGGACGGnGAATAGCCGACTTT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 791>:

GNMNS79TF gnm_791

CTCTTCGGATTAGATACGGTTTGTATGCTTCTCGATAAGGAATTGCTT⁵GACTTTGCCTAC
 TCTCTTCCTTCGAATACCGCTACGGAAAGCGTATCTATGATGATA¹⁵TTGTCGTGAAC¹⁰GT
 TATGGCGAGAAAGGCATTTCTTTTCGGACGATTGAACCTGCATGGCATTATCTCTCTC
 CCGT¹⁵TTTACCGACTCAAACGATCTCTAAAGCCTTTGCTTCGACCATTTATACCCCGTCTC
 TCGATTGGAAAGCGGATATATCGGTTTGAACGGATCATGCAACCTGTATTACGACAG
 GTAGAGCAAGACGGACGTTTCCACCCGACATCTATAAATGGGTTATCCTTCTGCTGGTAT
 CTGCTTCAAACGAnAAATGATTGACCGCC

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 792>:

GNMNS83TF gnm_792

GCCAAAGTTCCTCAGCAGGTCATGCCTTCGGCAAACCATGACGGGGCATTGAACAAACTG
 AAAGGCTTGATCGTGAAGAAATGTATCGAGTACGGGAACGACTACGCCTGCCACCTTC
⁵TTTCCGAGAGCTTGACACCTCCACACTGATCAGGTCGGGTTGAATTCGTTCCACAGG
 CTTACCATGCTTCGGTAGCCTACGATCTCTTCTCCAGTTGGCGTTCCAATCGCTCCAC
 TCGTCTTCGTTTCGCTTCACTCCAGACGCAATGCGCTCTCCTTGCTTTTGATCGTCGGT
 AAGGTACGCTCTCGCATCTTAAGCTGCTTT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 793>:

GNMNS87TF gnm_793

GCTTATGGCAATGCTGCCAAGGAATCATCGACTTGGCCGAACAGGCAAGTGCTAAGATC
 GTCGGTATGGGCTTTATCATAGAGAAAGCCTTTCAGAACGGGAGAGAGGCTCTACAGGAA
 ACAGGTATAGAGTGGAGTCGCTCGCATCATCCGAAGCCTTGACAACCTGCTGCATAACT
⁵ATTGCAGACGAAAACGAGACTAACCATACACCATTC¹⁰CAATACACATCCCCTCCGCTGGC
 TCAGTGGGGGGGATGTTGCTTTTTCCTTCCCTTTTCTCCGAATATAAAGACGTGGCACTT
 TTCGTTTCTCATTCGGAAGGCATATTGAGCCCTTTGAAAAAAGAGAAGSTCTCTATAATG
 CAAGAATCCGAGTACGTGCTACAGATATGCGCCAGCGGAGTTTAGAGACTGTCTCCTCT
 GTCTCAAGATAATAAGTGCCACGCAGGATTTCCGCTTTAACGGGAGG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 794>:

GNMNS89TF gnm_794

CCACTTTTTCCGTAAGGACAGTATCGTACGTTCCACCGCTCGGCTTTCGCCGTGTCCT
 GCCGGTGATCGGCGGCATAACGGCTATAGGGGTAGCACCCCTTCCGCTACGACCTTACGG
 GCAGTCTGGTCAATATCATCATGAATCGTTCTTTCGTATCCTACGGCGAGACAGCAGATG
 5 CTACCGACTTGGCCATCGGAGCATTCGGGATATCAATGGCTATGCCATGCTCTTTTTCAT
 TGATATCATCGGTGTGGCTCAGGGGATGCAGCCGATCGTAGGTTTCAACTACGGnCTA
 AAAATCCGGGACGGGTGAAGTCGGCTATCGTACAGTTGTGGCGTCAATCTACTGGTCA
 GCTTTCCTCGGTTT

10 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 795>:

GNMNS91TF gnm_795

GCAGATGGCGAACGGATTTGCCAGCTTGTTATCGCCAGACATGAACAGGCCGAATGGGTG
 CTTACAGACGAATTTGGCCGATACGGAACGAGGTGCAGGCGGATTTGGTCATACGGGCAAA
 GAATAAATTTTCAATCTCCCTCACTACACAGATGCGGATCCATTCATCATTTCTCCTG
 15 CTGTTTCTTTTAGTTATTTCTCCTGTAGCCGGAAGTATATCCATTACAGACAGTACAGCA
 TCTAAGTTCGACCGATATTTCTATGAAGGTGTCCGGCAGCGAGAACAGGAGAATTATGCT
 GCAGCTTTCGACATCTTTCGCTATTGCCATCGGTTGAATCCCAAGATGCGGCTCTGTTA
 TCGAGTTGGGAAACTGTATATTGCCAATGGCGTCAGGAGGAGGAACCCGTA

20 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 796>:

GNMNY45TR gnm_796

CGATTATGAGCGCTGTGCTACGCCCTACGCGCAGCTCTCAAGCCGCCGGACAATGAAT
 GCGACGATAGTTTGGATTCCATCAATGCCACTACCAGCGGATTGTGAAATACGTTTCCC
 25 AGCGTGCGGGCATCGGCATCAATGCGGACGATATCCGCGTTTGGACAGCGAAATCCGGG
 GCGGCGAAGCGCGGCATACCGGCTGCATTCCCTTCTTTAAATGTTTACAG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 797>:

GNMNY56TF gnm_797

GTCCGCTGATCGAGAACGCGCATGAAACGGTAGTCTGGATTGTGCTCCTGTTTGGCCGC
 30 GCCGTGCGACTGGCGCTGGCTTCGGGCATTACACCGCGCAGTGTATATCCTACTCGGA
 CAGACCATGCTCAGAATCAACCTGCACGCCCTTGTGTTAGGTTCGCTGATTCGCGCTG
 GTGTGGTATTTCTGTTTAGATTCAATATCCGCGTATTCAATATCCCGAAAAGATGCAG
 CGTTTCGGTTCGGCGCTAAAGGACGCAAGGCCGCCCTTGCCTTGAACAATGCGGGTTTG
 GCGTATTTGAATGGCGTTTGTAAAAAG

35

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 798>:

GNMNZ15TF gnm_798

CGCGACTGTTGGATAAGCGCGGAGGCGATGATTTTTTTCATGTGTGCTGTTTGGGGTG
 40 GAAATCGGTTTTATTGTATCGCGCTCGGGAATTTTGGCAAGCATTCTGCCGCAAAATCG
 TGAATGTTTACAGGGGCAAGGTGTGCAATTTGCGGCAAAATGCGAGGCTGTTGGCGACTGG
 GTTGCTTTGTTTTCGACTTCGTGTTTCGGTTTCTACGGTCAGCAGGCGCGGTTTTGTG
 TTTGTTACGGCTCAATTTCGGCTTGTGCGGTGTGAAAAACAGGCGGTGTTTTTCGCGCAA

-850-

5 GCGCGGGGGCGGCTGTTGGCGGTTTTCAAATCTGAAGCAGCGATCGTCCAGATGGAAG
 CGTCCGACGCCCAATACGAGAAATCCGTGCGGCAAAAAATTCGGCGCATCGTAACTCG
 GCGGGGCTGCTGCGGCTGAAGTCGTCCGCTTGGCGGCTATCAAGCGGCAACGGTGGCG
 ATTTGCGGAATCATCGATTGCTGTATAAGTGTGTCGCCGCCCTGCATCGAGAAGCATG
 GGG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 799>:

GnMOB22TRB gnm_799

10 ACTTCTTAAGGTCAACATCTACTACTGATTGACAGCGAATTAGCATTGCGAGGGAAAGG
 TGAAAAGAAATTTGGGAGGGGAGCGAAATAGAAATTCGAAATTCGACGTACATAAATAGCG
 GGAGTGTTCAGCGCGCGCATCGTGCATTCCCCGCACAACGGGCTAATGATCCATACCTA
 GCAGTGAGTCCAATTGAACAGGGGAGGTGCAGGGAATTGAGCTCCAACAGGGTGACGAG
 CCGTCGGGCGCAGATTGAAATTGAGCGACTCATTACGGTTAGGCCGAAGGCGTTGCAA
 TAGGCATCGGAGGATTGAATTTATGTACGCCGTAACACGTGGGGACGAGTCGCGGACAGG
 15 GCGAAAGGTCAAATAAATCTGGAGACAGTCGGCCTCTTTGAAAATCACCAGGCGAGCG
 TTTCTGAGTAAGATATCGACGGGGGCAAA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 800>:

GnMOB25TE220 gnm_800

20 ATTACTGCCAAAGTGAAGTGGGCAAAAGTGTACGAAGGCATGTGGTGCAAAATCCTCGA
 TAACAATGTCGGCGCGATTGTACGCGTGATGCCGGGCAAGACGGTTTGGTACACATCAG
 CCAAAATCGCCACGAGCGGTACGCAATGTGCGCGACTACCTGCAAGTCGGTCAGGTGGT
 GAACGTGAAGCATTTGGAATGGACGACAGAGGCCGTGTCCGTCTGTCCATCAAAGCCCT
 GCTGGACGCGCCTGCCCGTGAGGAAATGCCGCCGAATAACGCTTAAGGTGAAGTGGCG
 25 TCTGAACAGGTTTCAGACGGTATTTTTACGGGTATCGGGAATGAATGGGCTTAGACGC
 ACAGGACGGCAAGTTCCATAATGCCCGGGGATCCTTAGAGTCGACCTGCAAGCATG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 801>:

GnMOD17TRB gnm_801

30 AGGTGTACAGGTTCCCGCCATTAGTACTATGTGGTCGTGGTCCGGCCCCGAATGACA
 TCGTGTGACGATAAACCTGCTGGTCCGGCACCCTGTGGTAATTCGTGTGACCCCTAGAT
 TGATAAAGTTGACCCGTGGATCGGCAAAATATTATGTTGACGGCGTCGTGTTGTAATTTGT
 TGTGACACCTGGGCGAGTGGTTTGTGCCACTGTTGGTAACCTCCGTTCCGGCTGGAGTCCT
 ACGTAGTAGAGGTAGCCGGCCGATGTACTGTTCTGACGAAGACACGTGGAACATCGGC
 35 TCGTACGGCTAGTGGGCTGGTAATAGGCATGTTGTGTACTCCCCCTGACACCGACACC
 CCTTAATTTGACACCGCTAATGCCTGGATGGTGGTTATGGTGGTTAGTACACACCTGGT
 AATAAACATGTTCCCCCTGTTACTTCGCTTTAACCGATCCTCATACCGTTGCTCGTACT
 GAGCCCGATTCTGGCCCCAGTACTTAGACGTAGCCCTAACCTCCTGTTGAATATGGTGCC
 TGTTCCTGCTCGAAATGATGGGGCTGGAACGTTGTTGACGACCTGTTTAAATTTGAAAC
 40 CCTAATCCCTATGTTTAAATGGCGTAACGTTTCGATTTAAGCCTAAATTTGACAATATTGG
 TTTGAA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 802>:

GNMOD53TFB gnm_802

GGTAACGCCCTAAAGGCGAAACCCAACTGGACGCCGTGAAGAAAACTCTGCGCGCCATC
 TTCGGTGAAAAAGCATCTGACGTAAAAGATACTTCATTGCGTATGCCCTACCGGCATGAGC
 GGTACCGTTATCGACGTTCAAGTCTTCACCTCGTGAAGGTATTCAACGCCACAAACGTGCT
 5 CAATCCGCCCGGATGGGATTGTATGCGTTGCGGGGAATTGATGGGGCCGGGACGAGGAC
 TTGTGGCGCGCAGGTTGCCGAAGCGTTCCCAATTGCTCGCGCGGACCTTTACACAGGTAGTT
 CAACGCCGCTTTGACGCGCCGAAGCCGCCCACTAGGCTTTGGGTCTTTCCGCCGTGGCT
 TTCGCCGACGAAGATGACGGACGCGTCGGGCGACTGCTTCAGACGCGGGAACAGGGCGCG
 10 GGTCAGGCCCATAGGTGCGACGGTGTTGATGCGGTATTGGGTGACCCATTCCGCGACGGT
 TTGGAAA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 803>:

GNMOE03TRB gnm_803

GTTCCTCCCTGTAGGTGCGCAACCGAACCCCTATAAATTGTTGAATATCGTTGATGGATGTT
 GATTAGTACTAGGAATGTTGTAAGTCTTTAAGGTCCTTTGTTTCGCTTAATATGCCGT
 15 AGGAGAAATTAGTAGTAAGGTACCTTTAAATGCGTGGATAAAGCGGCTGAAATATATGTC
 TAGAAATAATAGCGGTGTTATTTGGTAGGAATAGATCGTTTACTTAACTATGTGCAATGAC
 CTCCTTCCAAACCTACGAAACCAAAACTGAAAGATCGCAATATGGCACCCCTCCCCAT
 GAAATCCCATCCTATGCTTGTATAGTGCTAGATGGTACCCCTTCGCCCTACGTTGTTT
 20 GAAATTGTTTAAACTTTGTCCTCTTCACACACGCTGGATCCGCTGTTGACCTAGGAC
 CTCCTCAACGGTACCCGTTCTATCACCATTTCGTTGGATGATACTATTGTTGCCCGGAT
 GACGCCGTTTCGACGATTAAAGTTGTTGTAAGAAAAATTGTTGGTGGCGCTGGTGATGAC
 CCGGTATTAAACGTTAATTGGGCCATGGTGCACTGGTAGAATGTGAGCCGTTGA

25 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 804>:

GNMOG34TF gnm_804

CGCGCCGAAGAAATTCGCCGGGGCCGCGGATGTTGAGGTCTTGGCGGGCGATTCAAAGC
 CTCGGTGTGTTTCGTAGATGACTTTCAGCCGCGCTTTGGCGAGTTCGCCCAAGGTCGCC
 30 GCCATTTCGACGGGGTGGTTCGGTAGTCGTCCACCAAGAGCGCGGTCCCGCGGTTGGC
 AACITGATGTCGCGGTATTTTGAAGCGCGCGCGGACGCTTCAAAGCCGACAGCTCT
 TTTTGATGCTTCAACCGATGCGGCGGACTTCCAGCGCCACGCCGATGGTGCCAAATGCG
 TTCAGCACGTTGTGCTGCGCGGGCATATTCAACGACGACTTCAAACGACCCCTGCTCATGT
 CTTTTCATTGAACATGGACGGTGAATTCATTTCGCGCGCCGACGTTTCGATGTCGGTG
 35 GCGTAGATGTCGGCGGTATCGTCCAAACCGTAGTAGCATAAGGTTTCTCAGCTTTGGGC
 AAAATCGCGCGGACGTGTTTCGTGTCATACACAAAAGGCTTTGCCGTAGAGGGCATA
 CGGTGGATGAAATCGATAAACCGCTGATGCAAGTTTTTCGACGCTGTGCCCTAGGTATCC
 ATATGGTCTTCGTGATATTGG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 805>:

GNMOG50TR gnm_805

TTTGACGGTTTCATTATGGCGCAGCAGCTTCCGAGCCGCTGGCTTCGAGTTTGGCGG
 ATGAATCGGGGCGACGTTACCCGCGGGGCTGATTGAAGACGCGCGGATGCTGCTAAAC
 AAAATCTCCGCTCGAACAATAATCCCATCGGATAAAAAATCCGCTCAAGACGTTTCGGG
 45 TTTCAAGACGCGATTTCGTCGGGTACGCGCGGTGCGGCTTATTTCACTTTAGCTTTCAA
 CGCGCCATATCCTGCCGCGTCCATTGTTCCAGCGGGATGAATTCAGAGCTACGCGGTT

GATGCAGTACAGCAGTCCGCCTTTGTACGCGGGCCGTCTGGGAAGACATGTCCCAATG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 806>:

GNMOH10TR gnm_806

5 CCCGTACAGCCCGTCAAAATCCGTCGCGTTGTTGTGCGGGCAGTAACACGCAGAGAGACGT
T CAGACGGCGTCGCCCGTTTCCCAAAAAACGCCGTTTAAAGTAAAAAATATTTTAAAAAC
AGACAGTTGATATTGACAAATTCAAACCGAAGATTTTAAATGCTGCCAACCCAATCCAA
ACCAACCGCAAACTTTGGGCGTGGATGCCGGCATCCCCGATTGCGCCGTGCTGCCCGGC
10 AGACGCGTCAGCGAGATCGACTATATGCGGCCGGTGTGTTTTTCAGACGGCATTATTGTTG
TTGGAACGCTATCCGCGCGCACTCTTCTGCTGCTGCCGCA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 807>:

GNMOH12TF gnm_807

15 CACTTTTATATAAATCATTGATCCCATTACCCCAACCTCCAATTTTTTGCCAAACCTCTA
TTGTATATTCAACACCTAATCTTTGTTACATCCATTATCACAGATTGTAAAAAGTAAAT
GCTTCTCTTTAAAGATCCATCAATCCTTTATCTAAAGCAGATATTAACCTGCTTCCAT
TATCCCTTTGCTACCGTTCCGATTATTACTGCTGCTCGCCTAAAAAACGTCGTATT
TAATATTGGAGTGATTTGACACATGGCACGTTATATTGGTCCTAAA

20 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 808>:

GNMOI35TF gnm_808

GAGTTTGCTGTAACCTGGTTTTACCATTATGGCGGCACGCGTAAACATTTGCCGAAAATA
CGGCTGAACCGCTGTAACAAGCAACATACTTCCAATATTTTAGATACGCCATATCAA
25 CCTCCTTTATCGTTTATCTTCAAAAAAGGGAAAGTTTTCAATAGCACTTCAATCAATTC
CTTCATTCCCCGSCCAAAAAATTGGACGGTAATTCACCCACCCCTACTTTGATTTTCAG
AAATATCTTTAAACTTCCGCTTAAAGGCGGACACTTTGTCATATCGTCATCAATTTCTCT
GTTTGCCGAACGCGTATTTTCCGCTTTTCCAAACCTCGTCATAATAACAAGATAnATTAA
GCAATAGCCCCCAAGCACTATTGCAATTACGACTAATCTATGTTTTCCCTAGTTAAGT
AATCTGCACGCTATCATAGATGCCCT

30

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 809>:

GNMOK36TR gnm_809

35 CCTGAAATGAAGTATCTCTTTATAAACTATCTTGGTAGCTCTATAGTGTCGTGACC
CAGTGGAGCTCCAAGCATCTGTGGAAGGTAATCTTCACAGACACTGTGGGATTTTCAT
TGCCTGCTTTGGGTTGTGACTCAGCTCCTTCGGTAAATATAGCCATTACATACTTTCTC
CAAGAGCTGAATTATAGTAATCAATTTTAAACTCAGAAACATTTTGTACAGAAAT
AACCCTAAAGGCTTTAAATTATATCAATTTCTGATAGTCACTTATATTCTATTTCTTG
ATTCTTACTGGATTATAAAATAGTCCCTTTGGTCTTTCACATGATCTTATTTAAGCC
40 CTCTTCCCTAGTGTGACTTTCTTACAATAAAGTTATTGGGAAAAACTCATTAATTCAT
TGACAGAAGGATTGAACCTCGGCTGTTTGAACAGATATACAACACGCTGAAGCTGAAT
TGCGCCGTGTATCCTGCTGTGGCAAACTCCTGCCGCGCTCGCGGCAACACGATATCC
TAGCAGACAGCGACCGTTTCCACTACCGCGAACAGCACAATGTTTGAATGCCTCGTTT
GAGAAATCGCTGAAAACAAATGGACGAAACACCATCTGACTTTGGGCTTCGGTTACGAT

GCTTCCAAAGCGATTTCGCCGCCGGAACAGCTTTCCACAAATGCGGCAAGGATTTCGGAA
TCCACGGGATTTCGATGAAACAATCAAGATAAGTATCTTTGGGTAAGCCCCGAAGTCG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 810>:

5 **GNMOL05TRC gnm_810**

CCCCAAATCGACCGACCCAAAAAATAACACCCCTGATGTAAGCCGTAGTAACCTCGTGT
ACGCCGTTGTGCTGCACTGGCAACGATCCTCTTGTTTAATACATGGGTAATTCTCCTGAC
TTGCCGGACCTACTTAACACATCGACCTGTGATGGCCCGTCTCTTCTGTGCGGTCC
GTGTAATTTGTTAGCGGCCCTCTTGTAAAGACGTATCCGGGGAAGCGGGCAACCGTAAG
10 TTTTCGACGCCCTCGTTTAATGTATGCAACGTTCCGTTGATTACCTAGTTATCTTTTT
CTTAACATTTGGCACTGATTCTACTAAAACTAAGCGGGGAATCCGGGCACACCGGTCGT
ATAAATTTCCGAAGGTAAGGTCGACATGTGTTAACCTGTTGTTGGAGTAATCCCACTAG
TAGATGGGTTGGACCGTTCCGCCCGGTGGTAATCCGAACCGAATTCGTCTTAAATTTGG
CGTTGCTGTTGATGAAGTAATAGGATGACGCTCAATGTGTGTTCCCTACGGTAAGG

15

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 811>:

GNMOL83TR gnm_811

CTTCGCGCGCGCTCCGAACAGAAAGGTTCTCCGCCTTTCAAACGCACACGCGCCTGC
CTTCGCGGGCCAGCCTGACCATAAGCGCATTTGGTGTCTCTTTCGCGGGTGCCTCGCCCC
20 GGGCGCGCTTGCAGCAAAAAATCCGTTCCGCATCGCGCGGACGAGGGACAGTATGCCGT
CTGAACACGAGCGCTCGTAAAGCACACGCTCTGCCTGCTGGATTCTCTGCAGCCCTTTGA
GCGTCAGCAGCCCCGCATCGCGGGACCCGCGCACGAGCAGCGAGCCGCTTGTAT
CATTTTGACGACTTTGTTCCCAATTGGCCTGCCAATTCGCCGTTCCGGCAAGGGTGTGTTGCC
GGTTTTTGACGAnGGCGGCGAAACGTCCGTTAAACTGCTTTTCCCAAAGCGCGCGCGTT
25 CGGTAAACGGATTTTCAGTTTGCCCTTGACGGCATCGCGCCACCTTCCTGAAATTTCCGCCA
TATCGCCCAAAGACGCGCGCAGCAGGGCTTTACGCTTTACGCGACAGTCGGCGCATGA
CGGGCGCCCGCAACATTACCTGCCTCTACATCCGTACGCGGAAGCACTGGGCTTGGA
CACGCCCTCTTGTGCGCCCGCGCCGCATCGGAGAC

30 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 812>:

GNMOM42TF gnm_812

GTCCCCCTGGAGGGGGCGGGCTCTCTGTTGCGGCGAGGTTGTGGTCTTCTTCGGGGTG
CGCCTGTTTTTTTGGGAGCGCTCGCGCGCGGCCCGCGCTTTTCTTCGGCTTGCCTTT
TTTTGCTTTCTGGGTTTGCCCTTCGGCGGGCTGCCTTCCGGGTCCGGGCTTCGCGTTG
35 CGGTTTTTTCGGTTCTGCTTGGCGGCGGAGGTTCTGCTCCGCGTTTTCGGGCTTT
GCGCGCTGCTTGGGTTTCGGGTTGnTGCGCTCGGTGTGGTGGGGCCGTTTTTTTGAA
GGTGTCCGGCTCGCGCTCGCGTTCGCGCGCGGGCCGGTTCGGGGCCCGCGCAACGCGG
GGTCGAACGGGTCGTGTAAGGCTCCTTCGGGTGTTCCCGCAACTGCCGTC

40 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 813>:

GNMOM51TF gnm_813

ATCAAAATATTGATTTATTAGAATCTATTGCAAAGCCATTTGCCGTTACACAAGAATG
GCACATnTcATAACTGATGAGATTATACCGATGAAGACAGACATTCAAACCGAATTA

ACCCATGCCCTACTACCACGCGATTATCTGTGGGC

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 814>:

GNMOM81TF gnm_814

5 CGTGTCCGCGCTTTCGCCCGACGATTTCGCCCTCAACCAAAATGGCTGTGGGACAAAAT
CCTGCGTTTCGCCCTTTATCAAACAGCGGACGTATTGCAAGGCATCTACTTCTTCAGCGA
CCGTTTCAATATCGACGAAAAACGCCGCACTTCGACTTCTACGAACCGATGACCGTGCA
TGAAGCTCGCTGTCGCCCTGTATTCACTCTATTCTCGCCGCCGAAC TGGGCATAGAAGA
AAAAGCGTGGAAATGTACAGCGACGCCCGCTGGACTGGACACTACACAACGACACGAAG
10 AGGCTGCA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 815>:

GNMOP70F gnm_815

15 AGGATCCCCGCCGCTTCGGTACGCGCCCTGGAAATGTTGGCATGGCTGCCGGGGAACCTC
GGTTTCCCTGTCCCGATGCGCGGGCGGTATCGAAGGCCGCTGA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 816>:

GNMOP96R gnm_816

20 ACGGCAAAAGCGTGATGGTCGTCGGGCATCAGAAAGGCGCGACACCAAGAAAAAATCC
GCGCGAATTCGGTATGCCCGTCTGAAGGCTACCGCAAAGCCCTGCGCTGATGAAGA
CGGCAGAAAAATTCGGCTTGCCCGTAATGACCTTTATCGATACGCCGGGCGCGTATCCCG
GCATCGGCGCGGAAGAACGCGGGCAGTCGGAAGCCATCGGCAAAAACCTGTACGAAC TGA
CGCGCTGCGCGTTCTGTTTTGTGTACCGTATCGCGGAAGCGGTTACGGCGGTGCGT
25 TGGGCTGCGCCTAGGCGATTACGTCAATATGCTGCAATACTCGACCTATTCTGTTATCT
CCCCGAAGGCTCGCGCTATTTTGTGGAACCGCCGAAAGCGCGCGGATCGCGCTC
AGGCTTTGGCATTA CTGCTGACCGCTGCAAAAGCTGGACTTGGTCGATACCGCTCATCA
AAGACCATTTGGGCGCGCGCATCGGGGATTTCGGCAAGAACCGCAAAAACCTGTGGACAT
CATCGCGCTT TAG

30 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 817>:

GNMOS68TRB gnm_817

TAGCAATTATTGTTTCGAAATAAGGTGATATTGCCATCCCGGCTGGCCCTGGCATCCCTC
ATGCGGGTGAATGCGTGGAAATGTTAAGTTGTAATTTTAAATTTGGTGAGTTCTCGATTA
CCGTTGTGTTAAATGTTCAAACCTGTGTGTGGTAAAGTCCCGAAAGATGTATGCGCAAG
35 TTGCCCCCCACGAAAAAAGTTGACCTCCCAAGAACTGGTCCCGCCCACTGGCTTATACCA
CTCGACCTTAAACTGGTAAATATATCGTCGCCGTATGCGTCTTAAAGTACCCGTGTTGTT
GAGTAGGCTAAGTCGCTCCCGCGTGTGAGCCCGTTGAAGGAC TCAACTCGCCCTCTGTG
TAAC TCGCTTAAAGTCTGCTTTATACATACCCGTAGCAGCTGATGGTGAGGTGGGCACC
GCCCGAACTCAAAATGTGGGTTTGTAAACTGCCCGGTATCCCGCTGGTAAATGGAACACC
40 TCCTATGTAAGATCTGATAACCCCTCGCCCCGTTGCTGGCCCGGATACTGTGTACCGGGA
GAGTAGGGTGGCCAAAGTGAGTAATGTTAAACGATTATGTTTAAACGTGGACGCGGTG
GACCCC

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 818>:

GNMOT05TF gnm_818

5 GCGGCAAAATCCACCTACATGCGCCAAGTCGGCTGATTGTTTTATTGGCACACACGGCT
GTTTTGTGCCTGCCGTTTCAGCATATCGGAACCTTTTGGTATTGTGGCGTAAGAATATCG
AAGCCTGCAGCGCTGAAGCAGTTGTTTGTCTATTGTTCTTTAACGGCGGGACGCCCTCC
TTCCGCGCGGCATTTCGGCGGGCGGAAACCCCTTTCCGGTGAAACGGATTTTGATTGCCG
CCCGATGCTGTCTGCAAGTTGCGCGGCTTCGGTATGTTTGAATTTGTGACAGGATGAT
10 TGGAGGGCTTATGCAGTTTCCTTACGCAATGTTCCGGCTTCGCGTATGCGCCGATGCG
CAGGGACGATTTTTCAGCGCCCTGATGCGCGAACACACGCTGACCGCCGATGATTGTAT
TTATCCGCTGTTTCGTATTGGAGGGGTCGGCGCGGAGGAGGATGTGCCTTCTATGCCGG
TGTGAAGCGTCAAAGTTTGGACAGGCTGCTGTTACGGCGGAAGAGCGGTAAAGCTCGG
TATTCGATGTTTGGCACTGTTCCCGTGTTTACGGCAACAAACCGAGCGTCCGACAGGA
15 GGCCTACAAATCCGGAAGACTCGTGCCGTCAACTGTCCGCGCTTGCAGAGAGGTTTCC
CGAACTGGGCATTTATGA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 819>:

GNMOT41TR gnm_819

20 GGGTATGCATGTTTGTATTCGCTTCTTTCAGCCAGTGCGGAAGCCCCAGCGTTTGAAAT
CGACAACCAAGCTGCGCCCATTCGCGGTAGTACGGCGCAGGCTTTCGATGCCGCTGA
TCTCGCGTGCAAGTCCACATCGGTTTAAATCGTGACCAATCATACGACAGCGCAGTT
GGGCGAGCGCGGCTTGCAGGTTTTCGCCCACTTTCGCTTGTATTCGGAAGCGTGTCCCA
TCACACCAAGCAGCGAACCGTAGGCTTCCAGCCATTTACCCGCGTTTTCGGGCCGGGC
AATTCGAGCTGAACGCTCTATATGCCCGTTATCGCCTACAACCTTTGCAATCCATCCAC
25 CTGTTGGCGACGCGTGCAACAGCTTCAACGAACACTGCGCCATCGGCATCGAACTCGTG
CCGGAAAAATCGACTATTTCTGCAACATTCCCTGATGCTGTTACCGATTATACCGT
AAAACTCGTTACGAAACCCGCCAAAGTCGCCAAAC

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 820>:

GNMOU02TR gnm_820

30 AGGTTGGCTTGTGTCATAAAAACTTATTACATGTAACGGTTTGAACGGACATCCGTC
GGGTCCGAATGTCAAAAAGGCGCGATTGTACCAAAGAAGTTGGACATAATTTGTTTGCA
GGCTGAAGATTGCTTAAAAATTCATTAAAGTGGGCGGAACAAATAGTTTGGGTACAGCG
TGTGAAATACCGCTTATCCCTTAAATAGCGTCCGAAATTTCTGTTCCGACCGCATCAAG
35 ACACACGGTAATCCGCTGGAACCCCGCTTTGACATCAACAAACAGAGCATTGAATGAA
ATTTCATCGACGAAGCAAAATCGAAGTCGCCGACGCAAAAGCGGTAATGGCGACACAG
TTTCGCGCGCAAAAATTCGTACCGCGCGGAGTCCGACCCGCGGCGACAGCGGCAAGG
CTGCAGCGTCTGGGCAGAGCCGAAGATCACACCAATACCTCGTCAATACCGCTTCGT
TAAACGCTA

40

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 821>:

GNMOU06TR gnm_821

GGTAACAGCGGATCGGCATTCTTAAATACCCGTGATCGCTGTAATCTTAGAGAT

GGCGGAATATAGCGGACTGCATCACCGCCGCCGCCGATTCAACATGGGCGCCATCGCG
 ACATCCACATCACGCGCTCGGTTTCCAAAGAAGCCTGCCCGCTGGGCTTGCCCGGACCA
 CGAGCACCCACCGCGTATGGCTTTGGCGGATGCGTTGGCGGTCTGCTGCTGCGGCGAC
 CGCGCTTCACGCCCGACGATTTGCGCTTGAGCCATCCTGCCGGCAGCCTCGGCAAGCGCC
 5 TACTTTTGGCGGTTGCCGACATTATGCACAAAGGCGCGCCTGCTGCGCTCGACTCG
 GCACGCCCTTGAAAGAAGCCATCGTCAGCATGAGTGAAAAAGGCTGGGCATGTTGGCGG
 TAAACGACGGGCAAGCGCTCTGAAGGCGTATTACCGGACGCGGATTTGCGCGCGCTGT
 TTCAAGAAATGACAAATTTACCGGCTCTTCGATAGACGAGTCATGCATACGCATCCTTA
 10 AAACCATCTCGCCGAACGCTCTGCCACCGAAGCCCTGAAAGTCATGCATGCAAAACCATG
 TGAACGGGG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 822>:

GNMOU37TR gnm_822

TTTTTCACACGCGAGTCGAAAACGTCAGACGGAGTTTGGGTCGGACAGGTAATGTTGGT
 15 CGTGCTTATTGAAATTTTCGACAAAGGTGCTCTGAAAACCGAAAATATGATTTTCAGACCA
 CCTTTGTTGTAATTTGGTAAGTATATGTTCCCGTGTATAATTACGGAATTGCAATTCAT
 ACAAAATACACAGGACACCGCATGACAGAAATCCATCACATGAGACAGTACACAATACGAT
 GTCATGACTGTAGGCGCAGGCCGTCAGGTTTGTCTGCGGCATCACAC

20 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 823>:

gnm_823

ACACCGTCTTGTTCGGCGGTATGAATATGGACAAACAGACCGCGACCTGCTGCGCGGT
 GCGAAATCGTCGTCGCCACCGTCGGACGGCTGCTCGACACCGTAACACAGAAAAACATCC
 25 ATTTGAACAAAGTCGAAATCGTCGTTTGGACGAAGCCGACCGTATGCTGGATATGGGT
 TTATCGACGACATCCGCAAAATCATGCAGATGCTGCCCGCCACGCCAAACCGTGTCT
 TTTCCGCCACCTCTCGGCCCGATACGCAAACTGGCGCAAGACTTCATGAACCGCGCCG
 AAAACCGTCGAAGTCGCCGCGCAAAACCGGCATCGCAACTCCAAAGAGAAAGAACCCAAAC
 CGTCATTCCCGCGCAAAATAGAAAAACAAAAAACCCTAAATCCGTCATTCCCGCGC
 AGGCGGGAATCCAATCCGTCGCGTTCCGTTTTTTTTTGAATTCAGGTAACCTCCAAA
 30 CCGTCATTCCCGCAAGCGGGAATCTAGAAACTCAAAGCTGCAAGAAATTTCAAAAAAT
 GACTGAAGCTCAAAAAACCGGATTCTACGAAAAACAGGAATCCGAGTCTCAGGCTGGC
 AAAACCGTTTTACCCGATAAGTTTCCGTACCGACAGCCTAGATTCGCCGCTTCGCGGGA
 ATGACGAATTTTAGATTGCAGGCATTATCGGATAAAACAGAAATTAAGCGTGACGAAA
 35 ATTTATCCGAAATCACGCAACTTTCCGCGTCATTCCCGCAAGCGGGAATCTAGAAA
 CTCAAAGCTGCAAGAATTTATCAAAAATGACTGAAACTCAAAAAACCGGATTCGCCGGA
 AACAGGAATCCGAGTCTCAGGTTTGGAAAAACCGTTTTTCCCGATAAGTTTCGATACCG
 ACAGACCTAGATTCGCCGCTTCGCGGGAATGACGAAATTTAGGCTCTGTTTTGATTTT
 TGTGTTTTGCGGGAATGACGAAATTTAGATTGCAGGCATTATCGGATAAAACAGAAAT
 40 TAAGCGTGACGAAAAATTTATCCGAAATCACGCAACTTTCCGCGTCATTCCCGCAAG
 CGGGAATCTAGAAACTCAAAGCTGCAAGAATTTATCAAAAATGACTGAAACTCAAAATGA
 CCG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 824>:

GNMOV26TF gnm_824

45 GTGCCAACAAAGGCGAACCCCGGAATGAGGCCGATACCAATATTCTGAAAAACGTCGAA
 TCTGCCTTGCAAGACGCGGACATTACCGTCGGCAACCTCGAAGGCACGCTGTTTGACGAA

-857-

GGCGGTACGCGGAGAAAAATGTGCAAACCCCCAAAATATGCTATGCATTCGGAACGCCCT
 CGCATACGGGCAATACCTTGGCGACGCGGGATTGCGACTACCTCAGCTTCGCCAACCAACC
 ACAGCAACGACCTTCGGCGCGCAAGGCATCACGGCAACGCGCGGAGCGCAGCTCTTTTA
 CATATCTCGATCGCGCTAAAGCCGCTGCCGATAACGATGCCAAAATTCGGGGAATACCGC
 CATCGCCAGATAAATTTGTCCATCATCAGACCTTTACTGTTTCAGACGAGACGACATTTG
 CCGCACGCTTTGGGGCTTATCTTTCGATTTCGCGTACGTCGCGCA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 825>:

GNMOX61TRB gnm_825

10 GTTCCGTCCTTGATTGCGATTGGTCGATAGTCTAATACTACGATCCTTGTGAGGTAGATG
 AATGTAACTGGTAGAAGACGTTGTTACTTGTGTTCCGCCACGACTATCCGAATGCGG
 ATGAGAAAATTTGTTGATGCATCGGCTTAGGAAGGCCCGTAATTCGGAAGAAGCTGTTTC
 ACGCCTTCGTTGTTGATCGTCGTTACCGAAGGACCCGATGAAGAACTGCTGACACGT
 CTTGTAATTTGTGTTGTGACGTTACTTCGATTACGGTGACCGTTGTTGAAGAAAAATCGG
 15 GTGAAGCGCTTGATGACACGTGAATCTGAAGGTACAGACGTTGACACGCTTGTGAGTT
 CCGTTGAAGTACGTACCATTAATTTGTGATGATCCGGTAGAGTCCGTCGCGGATGAATCGA
 CCGAACTATTGGCGCAATGAAGAAATGTAAAAGTTGCTACTTCGATTGATGTGAAT
 ATCGGCCCATTAAGATAAACAAAGGGGGCATAGACGAGCAATATAATTCGAGAATAACC
 CGTTGTTGAGTCGAAATGTTTGTGTAAGATTCCCGCA

20

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 826>:

GNMOY35TRC gnm_826

AAAATTTGGACCTCTCTCAAGTGAATCCGTTCTATCTAAGTCCTCTTGTACTCCCC
 CTAGCCCATTTGACAAGCGGGAACGTTCAAAGTTCTCCTCCCTCTCAGAAAGGAGGCGACT
 25 TAGTTGTAGGCCTTTTCATGGTCATTCGCCCATGATCCATATTTAGCTACGAAGTACATT
 GCGGCAAGTGGATCTTCCGGGCCACTTCATTCATCCTCGGCACCTTTTATCTTTACGGC
 GCGATGGTGGCGCGCATAAGATTTGGGAATGCACCTATTGTAGCACGTGATTCGTGAC
 CATCAGTGACCTTGATCCTACGTATCTGAGCCGTAGAGCGTAACCTGGATCATGACTGGC
 30 CCCCGAGACCGGTCCTGTTCTGTGTCGGTCAATTTCTGCAATGATTACCGCACGATG
 CGCGAAGTTTCGGCTACAAGGTTACGAGGATCCGATGCTACTTTTATTCCTTCTTGTC
 CGCTATTGGTAGCTCTACGAGCGTTTAATCGAACGACGCGTAATCAACGATAAGGCGCC
 TGTCTGCCGTGGGATCCAATTTAATACTCTATGATATGAGTCGATGATAGTTACGTAGTA
 TTCCG

35 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 827>:

GNMPB01TRB gnm_827

ACACTCTCCTAACACTCCTGGCTGGTACACGTTGCTTGAATTTGGGCCCCACACCTAGATG
 GTACCCCGGACCACTGGACCCCGTGATCTGAAGGTGCGACAATGATGTGCGATTTGCG
 40 TTGGACCCGGAAGTGGACCCCGTGTGGACCCCGCGTCGTTGTCACGCGACAGATCCTG
 GCCCGCGCCGCGACGCAACTAATGTAATCCTGGTGATACTGTTGTTGTGTCGATCCCG
 GTACCATTTGGCCAAGATCATGGCGTCGTTGCTAGACGAACAAGTAATGCCCGCGCTTCG
 TTGTGATTGCGTTCCCGTTGTTGCTTAACGCTCGGTGGAAGTGGATCGGTGAATTCCTT
 GTTCTATGGACCTGTTGTTCCGTTGTTGTGCGCAATA

45 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 828>:

gnm_828

GGTGGCGGCGCTCTAGAAGTGTGATCCCGGGCTGCAGGAATTCGGCAGAGCCCA
 CAGTGAGTTTCCCCACACTCGGCTCCTTGGAGCCCCGACAGTCCATAGCACCCCGAGGAG
 ATGTCTAACCTTAGGGACTTGGAGGCTCCAGGGGTCTAGGCAGCTGAGTTGTGAAGT
 5 TGCATGGCAGGGACAGGCGAGGCGGAGGCCAGGGTGTCTGTGATTGTATCCGAAGTAGT
 CCTCGTGAGAAAAGATAATGAGATGACGTGAGCAGCCTGCAGACTTGTGTCTGCTTCAA
 gAaGCCAsACAGGAAGGCcTGCCTGCCTTGGCTCTGACCTTGGCGCCAGCCAGCCAGCCA
 CAGGTGGGCTTCTTCTTTTGTGGTGACAACGCCAAGAAAACCTGCAGAGGCCCGAGGGTC
 10 AGGTGTAAGTGGGTAGGTGACCGTAAACACCAAGTGTCTCCAGGAACCCGGGCAAGGC
 CATCCCCACCTACAGCCAGCATGCCACTGGCGTGATGGGTGCAGAGGGATGAGGCAGCC
 AGGTGTTCTCGCTGTGGTTTGGGAGCCTATAAAGTGAGACTAGGCTGGGCATGGTGGCTCC
 CATCTGCAAAACACAGCACTTTGGGAGGCCAAGGTGGGCGGATCGCCTGAGGTCAAGAGTT
 TGAGACCAGCCTGGCCAACATGGTGAACCCCATCTCTTAAAAATATAAAAAATAGCTGG
 GCAATGGTGGCAGGTGCCTGTAATCCAGCTACTCAGGAGGCTGAGGCACGAGAGTGCCTT
 15 GAACCCGGGAGGTGGAGGTTACAGTAAGCTGAGATCTTCCCACTGCACCTCAGCCTGAGC
 GACAGAGTGAGACTCCATCTCAAAAAAAAAAAAAAAAAAACTCGAGGGGGGGCCGGGTAC
 CCAATTGCGCCTATAGTGAGTGC

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 829>:

GNMPE45TF gnm_829

TTAATCAAACTTTAATTCATTATTAAATGCCTGCAAAAATATATAAAAGCGGGTGGGTTT
 TCCCGACAAATAGTTTTAATTTGGAGCAGCTATATTTTTTTGGTGATGCGTAAATCTTT
 ATTTTCATTATTTATTTTGA AAAATGTATTAAAACAATAATGGAATTGGATATTGAAATAT
 25 CAGGTTTTTTTGAATTAGATTATTTAAGATATAATATAAGTAAATGGAAAAATAATA
 ATGAAAAATTTGATACAAACGACTAATTAATGGACAAATATAAGTTAGATTGGACACCCA
 AACCTAAAAAAGTCTGAAACTCAATTTGGTTTTTCAGTAAGCGTAGGTTGGCTTAAAAAC
 CCAACCCACCAAAATGCCGTCTGAAGCGGTATTACAGCTTTCAGACGGCATTTTGTGAATG
 AAACAGGATATTGAGAACTAAGTTCTTTAAAAATCCCTACACCTGCTCCTTCCACGGCAGC
 30 ACCTTGGTCAAAACGGCAGACGGCTACAAAGCCATTGCCCGTATCCGAACCGCGACCGC
 GTCTTCGCCAAGGACGAGGCAAGCGGAAAAACGGGATACAAACCGGTACCGCCCGATTAT
 CGGCAATCCGATACAGAAACCGTTTACATTGAAATTTT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 830>:

GNMPE65TR gnm_830

CCCCCCCATCATCGTACTGCCCCGAAAGGGACGTACCCGGAACCAAGTGCAAAACATTTGGGC
 AACCGCGATCATCAAGGCATCAATCGGACGCAATGCATCAACATCGGCACATTTTAGGCTC
 TGCTCGGCTTTGGCGTTTCTCCACCCCAAAAATAAAAAAACCGCCCAAAACAGCATGAC
 TGCACACTCAAGGGGTTAAACAGATACTCTTGTGATTGTTTGGCCGAACAACAGCCCCAT
 40 CACGCGGCGAGGTATMAAGCAATGGCAAGATTAAAGCAGAAAGCGGTTGGCTTCCGGTTC
 TTTTCCCAAGCCGTGCAACACATTCGTGAACGTTGCCGGTATTCAAAACACTACCGCCAA
 AACTGCGACCCGAGCTGGATGGCAATTTCAAAACCTTGTGATTGCTGTGAAAACCAATCAG
 ATTTGCCAGTTTCAGGCTTCATGAAGCGGAGGTCAAACCGATCGACAGGGAGAAGGTGCGG
 GGGCAGGTGCGGGA AAAAGAAAAGTTTTCAGATTGACGGCGAAACCCCTGCTGAAAAAT
 45 CCCGAATTTGTTGTCGCGCGATGTATTCCGCACTGGCTTCAAAACATATTGCGCGTATC
 CGCGTTATTTGCCGATTACCTACACAGGCGCAGCAGGATAAAGTGTGGCACTTTATC
 GCACAAGGGGATTTGGCGCAAGCAGACGCTAAGGTGAAGGAnCGATTTCCTATTACCGG
 GAATTGATTGCGGCCAACCCGACGCGCCCGCGTCCGTATGCGTTTGGCGGACGAGTATG
 TTT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 831>:

GNMPE66TF gnm_831

5 GCTTCAGACGAGCCATTATATATGGAGATTATAGTGGATTACAGGAAGCGCGTTCTTTTC
GCGCCGGAAGACGGCAGGCAGTTTGTGATGCCGACAAAATTATCGCCSCCGCCTACGGT
TTGGCGTTTTCTTTGGAAACAGCTTCGGAAACGACGGAAGGCGGCGCACGTTCTGTATC
GCCGATTTGAACATTACCGTGCCGCTCTGAAACGCTTGCCGATGCCAAGGCAACAGCCCC
CTGTTGTACGGGAAACTGCTTTGTGGATATTGTGCGGCAGAAAGCGGGCGCAATGTC
10 GAGTTTAAAGACGGCGTATTGACGGCAGCCGTCGCTTCCTGCCCGTCAGGACGGTCAG
ACGGCATTGTGCAACACGGTCGGTATGGCG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 832>:

GNMPF05R gnm_832

15 ACTATCTTCTAAAGGTTACATTTTTCTCCAAAATAGAAAAGGCAGCTTGGATATTTTCAA
TGGCAGGGAAGGCAAACTCTTCAACGAGACTGCCCAAAATAGCGACAACAGGAACCTCCGAC
AAGGGTTCTTTTTTGTACACCAATAGCGCTTCCCTGCTAAACTTTGACGATCTAGTCT
TCCTTCACCAACG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 833>:

GNMPF17F gnm_833

20 TTTTTTTTTTTTTTTTTTAAAAAATATCATTATCTTTTATAAACAATAGCAATAAAT
TTATTATATGTTAACAGCAGAGTGATGACATCATCAGTATCACATAGCTTCTGGAAAAAT
TCCACCATACACTTTTGAGAGAAGGACAGATAAATGGTCGATAACATCTTAGTATTATCA
TGGAAAAGTTTTGATCTTATAGACCCCTCAACACCCAAAAGTCGTAATCAGTCTACTCA
25 AGTAAGATTAAATATATATCTATATTTCTGGTCTGAGATTCTTTCACTTTACTCAG
AAACATATACCTGAAGGGGGAGGGGAGAGTGCACAGATGAGTCTGTTGTATGTGGAT
GGTCACAGAAATGACAGAAAATAGTTATTTAATCTGAATCTGGACCCCTGCTGAAAACACTGC
CGTGATTCTCATACACTCTCTGCGCCTCAGAAAGTGAACCTGGCTGATAGT

30 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 834>:

GNMPG84TR gnm_834

35 CGATTATTCTGACAATCAGCATTTTCAGAAGTATGCCTAAAAGTGGAAATCAGACCGGCAA
GTAATGGCATTATTATACCCCTTGAACGAACCGAAAACGACAAAAGCCGACATAATGATAA
AGGCGAGCAGTACGGCAAGCGGAGTTTTTCGGCGTGCACGCATAACGGCTCATAGCTTG
CCGATATTGTCTACCGAAACATGAAAGTTTTTCGGCTGGGACATACCGCGTTAGACG
GTAAAAGTTATGTGAAGACCATGTCGTATCGTCTATAACCTGCGGTATGCTTTATATCGT
GAAACATGCCGCTCTGAAGGTATGCCATCTGCTGACAGGCTATGATTTCCGGAATAAAT
CGCACAAA

40 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 835>:

GNMPH28TRD gnm_835

CGACGTTGAGTGCCCCCTTAACTTAACTCCCCCGTGATAGGGTGCCGAAAAACGTAAC
GGTGAATGCTTGTGAAATCGTTAATATTGTATTGTTTCCTCTGCTTAGCGGTGTTTCGT
AAAGTACTTGGTATCGTGCTAGTTAAAGATCGTGTGTGGCTCGTTGTACCCCTCGCGCT
GCGTTA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 836>:

GNMPH38TF gnm_836

GCGCCCCCAAAACGCGGCAAGCGGCATACCGCGCCGATGACTTTGCCCATCGTGTCAG
GTCGGGCGTGATGCCGTGCAAGATTGCGCGCCGCCGAGCGCGACGCGGAAGCCGGTCAT
CACTTCGTCGTAATCAACACCGCGCGTATTTTCGGTCAATCCGCGCAAGCGTTTGAC
AAAGGCTTCGGTCGGCGGACGAAGTTCATATTGCCGAAGAAGGGTTGCACAATCATTCA
AGCCATTTCATTCCACTGTATAAAGTCCGGTCATTACCTGTGCTTTGCACTCTTGGAA
ACCGGGCAACGGCTCAGTGGCAGGGTTGGCAACCAAGTAACCGTATCGCCGACTTTCG
CTGTCCCAATTCTTTACGCCGTATTCAAAAAG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 837>:

GNMPH48TR gnm_837

GTCCGATTGCGCAGnAAACCGGGCTGAAAGTGGACCTAGAGGGAAGAAGCGCTTAAGA
GGACAATCTCGAGCTGTTAAAGACACCTGCCTAGGGGGTAAATGAGTGGTGAACCCGGTA
TGGGGTGTTAAAGACAAAACCTACTGGCCAGAGGGGTAAAGCCTACCCAACTTAAAGTG
GTAATCACATGCTTATAAAGACTCATAAATACCAATGTTATACCCCGGTGGGGGCTGATA
TTAAGACCTCTGGGTTTGCTGAAATGGGCATCAGTGACGTGGTTGGTATTAAATCAGAATT
AAGCTAATAGTGATATGGGTGGAGTAAACGTAAGTAAGTTACCTACCGCGTAAGGTTA
CAGATCAGATGGCTTGCACTAAACCTCTATAAATTATTACTCAGCTTGTTATTACTGTTG
CTGTGGGAACGGGAAGCGGCTACCCACATGGGGGTAGAAAAGTGGCGAGGCTTGCA
GTGATCCTTGTAAATAGACGACAAGTTAATTTGGGGCTGGCTTAAATCGAGACCGTCTT
TTGGCCCGCTTATAGAACCCATGTATAATAGTGCTGAAAAGATCAAGCGCAATAGTGGA
CCAAGGGTAGACTCAGGGGTGCGGCAAAATACAACCTGACCGGGACGAACAGGCATTCTAA
ATCCGAAACTAGGGnTAGTTGTAGTAGAAAAGGCAGAATTGAAATTACTACTAAGTTTT
AGATTGnTAGTAGGATGCCTTCGATTCTnTAATCTTAAGAGACAGnTGGGAAGGGTGGCA
T

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 838>:

GNMPI02TR gnm_838

AAGAAACAAACCTCGCCCCCCTTCTACGCCCGAGGAGCGACCATAAAACGAAACTGT
CGACGCGACCACTGGAGCTCGCCTAAGTGATTGAAAACAGAATCCCCCTAGTGCT
TCCCGACGCAATGGCAGAAACCCAGATAAATCTTGACCGTGATCCCCAATATATCTCCC
TCCACCGTGGACAGAACATCAAGCAACGACAAAGAGCTCACCGCCACCCCAAGATGCCA
GACCGACCACGAAACAATTTATAGCAAGAGAATTTACCATACCACGAATGTTGTATAAATCT
GATTACATTTGTTAAAGCCCCGGTCAAAAGCTCGATCCCTAAATAGTTGTTGACGTGCT
TCTCTGTTTCAACCGGTGGAATATAAAAAGTCTGGTAGCTAAGACTGTTATGCAAACTGT
TGCAAAATGTTCCCGTGTGTCGTGTT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 839>:

GNMPI04TR gnm_839

5 TTGACCCGGGTAACACATTCTTGACACCACGTCGAAAAATGGACACCTTACAGAGTAA
GTGGCCCGGAATATCGTTAAACAGTTGATGATGGTAGTGGCCCTGCGCGTAAAGCCCTTG
AAGGATGTCACCCCTGTCACGGGTGATAATTGTGATAATAGCGTTGACCTGTGCATCGGG
GACCCGCGGACGATAAGTCGGCCGCTGGTAAGGTAACGCCTACCCCGACGAATCTCGGTG
ACCTCGGTAGGCTTGGCATGTAACCTGCCAGGTTAGGAAGTTAAGAACGCTGTGTCGAAA
ACAGCCCTAGATGGTACCCGTACCTTCTATCCCCATAGGTGAGCTCAATGCCGTGGAC
10 CCCTTCATTCTAGCTTAACACATGTAGGCCCGTATGGTGAATCGTTAACACCGCTTC
GACGAACTAACCGAAGATCGTGCCTAGTGAATTGAGGCAACCGTTGAAAGTGCTA
GTGTATTTTCGTTATCGTATGTTCTAACTGGCCCGTTAATTTGAAACACTGACGA
ATA

15 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 840>:

GNMPI06TR gnm_840

TTTGGCGGTCGCGCTCCCGGTAAGTAGTCTGCTGTGGGGTGTGACGCCGATGACACCTTT
CCGTGCGGTGTACACTGAGGCCGTGTTCTGTAACAATTAACCTTAAAGTTCGACTTTAAGG
20 TATACTCCGAGGGAGAGGGCTACCCGTTGCCGATGGAGCTGTCGGTAATAACGCCTAC
CTTGACCTCCCCGTTAAACTCGTAGGACGGCGTGGACCCGTGATCTCCGGAAGCTAAG
GGAGACCCCTTGTTGTCGGAAGGCCCGGGGTGACCGCTATGTTGTTCGATCTGAGGCC
CCGCCCCCTGTGAGGATCCGGAAGGCAAGCACTTGGTGTGGTGGACCCGCCGATGAG
CCTTTAGCCGTTGTCGCGCGACAACTACTCGGGCGCTGTACCGAGGTGCCCTAGTGC
AATTCGCCGAATTGGCGCCCCAAGCTCGTTATACTTAAATCGTGCCGGAGTGGCGCTGG
25 TAAGGCACGGCCCCCTAGTGCAATGACGACGGCGTTGCGTCGCCGCTGACGCAAGGTCG
TTTGGTAAAGTTTAACGTAGTTAACTGACAACGTTGGTACCCCGTTGCTCCCGTGGA
AC

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 841>:

GNMPI11TR gnm_841

5 GTTCCCCCTAACACAATCCCGACAAGAAGGCACGGTAACGATGTCGACAACGTTGAGCAC
TGTGATGATCACTACTCTAATTAACGCAAAATTTCCCCGCGCTTACCCACCACTCTAC
TACCACCGTCCATACAAGACCGAAGGATGATTATGGCACCGGTACCTCCATTTTAAGTTT
CGGTAGCAATTTGACAATACCCCTCTTGCCCTCTATGTTTAAACACCTGACAACACAAT
35 GCGGTACCCCGTCGATGTCTCTGCGTTCCCTCCACACCTTACTTCCCTCCGCTAACGT
ATAGSCTGGCAGAACCGTAGGGTAAGAATGTCTATTGTTCTAATGGCGGGTCCGTTCC
GTATTATGACACCGCTAAAAGTTCTCTACCCTACCAACCCGCTTGTATACCTATCGTGG
TATATAGATTCCCCTTATAGCCCTGTCAAACGCAATTCCATCGCTTGCACTACACCTTA
AACTTAAATTCGAAGCCTGTTCCTTTGTAAGTGTCTCGGTTAAGGATAAAGTTAACC
40 TCTCGCTCGACCTGCCGATCGACTTGCTGCTGGCACCGCAAGATCGTGTGTAGCCA
T

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 842>:

GNMPI15TR gnm_842

GGGCCATAAGGTGCGACCCCTCTGGATGACCCGATCACGGAGGGTGTGCGTGGGGTAGGTG
 GTACTAAAGAATGTGTTTGTACCCCTCCCGAGGTAGGCCGTGATACTGCTTCTGCTCGTA
 ATTGCTTTGATTCCGCGGACGAATCGTGTGAAGACCCTTGATCCTTCGATAAATTTATCC
 5 CGGTGTAATGCCGGTAACACACGGTTAATATGTCTGGTAGCGTTGTTGTGTAAGTTGCGA
 CGTAGATGGTGGACCCTTAAGTGGTGAAGTTCGCCCGCTGGTTCCGTTCTGTTGTAGG
 ATATGGTGGTGGTGC3AAAGCTGGTGAAGTTCCCCAAATTTGGTCGTCCTTAATAACTC
 GTTGACCCCTACTAATTGCCCGCTAGGGAAAGGTAAACGACCCCTCGCTAGGCAGAAAGC
 10 CACTCCACCGAACCATCCAAAGACAAACGACGACCACTAATATCGCACCTAAATATAATCC
 CCCAAACTTGTGTATGTGGTAAAGGTAAATGGCACAGGTATGTTGTATCCCCCG
 TGTCAAACTATGTTCCATCCAACTGGAACGCAGTGAATTTGGCAGTGTATCTCGCT
 GGGATGAAAGGGTGGAGGCCCT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 843>:

GNMPI18TR gnm_843

TTCCGCCCTCTTATGTCCTTATCCTTAAACTTGACATTGTTGCGTTAAGTATGGGACTT
 TAGCTATTAACTGCCCGTTGCGGCAAACTAAGTTCGCTACATAGGTGTCGTAATATC
 CTGCGCAATGGCCCTGGTGTGTATGCTGCTTACTGCGAAACATCTGTCTGCTTAGCTCGTA
 GAGTAGTTTATGTGTTGTACCCGCCGGGCACTCGCTTCTGGAATCTCCCTTACCTT
 20 TATATCCCTCTTAAAAACCCCTGTGATTAAAGTACGGTGGGATATGCCCGCTGTAGTA
 AGTCGATGTCATAATTATAACTCGTGGGTCACGTTTGTGCGGCTCGCGTTGGGAACCTTAG
 GTGGCGCCGTAGTTCCCTACGTGGCAGCAGTGGGTAGATTGCTACAACGGCCGGCCG
 AAGGTACGATTTACGCGTAGTGCCTTGGCCAT

25 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 844>:

GNMPI22TR gnm_844

TAGCCGATAAATGGTCGCCGCCCGCCTGTTACAAGTTGTAACACTAAGCCACAGTGGACC
 AAACCCAACTAGGATAAGGTAATGAAGTTGTAGATAGCATAAACAGCATGGTAAGGTGA
 GACAATGTTGCATCGGCCCAAACCAACTTATCACAATAGACAAATAACGTTGCTCGAATG
 30 TAACGCCCTAGATGGTACCCATCCACTTATAGGCCCGCTTAAGTTCCAGACCCCGCTTCG
 TGAAGCACCTTAAAGCGTGGATGAGCCGCTAGGCGCAGGATACCTCCCGCTGCATTAGG
 TAATGGCCCTATTAAACGCCCGTTGTTTATGGCTACTATGTGGGCCCGGGCTGTACTGA
 AGAGTGAAGTTGCACCTGACGTTGATTAATGCTGGAAAGAAATGACCCGACTCCTGCCGAGT
 TGCAAGACCTGTCGGTGGTGGTCCCTACTGTGGTGGCCGACCTCCTCCCGGCCATAGGT
 35 GCTTGAGGACGGAAATTAACCTGGCTAGTGAGTTGTGCGTAATAGGGATGTGCCGGGTGG
 AGTTGCTGAGCCCGTTCCTAACCTGGGGACAATTAGATTGACGGTTCGGGTGGTATTGG
 CGTGCCCGGGTATGACGCCGA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 845>:

GNMPI23TR gnm_845

AAAATTCGGTGCCATTAAATCCAAGTTCGGTAGTATACTTTTCCCTGTTAAGTCGG
 TGGCAACAGTGAAGAGGTTTGTATTGACTGTTTCCTTTAATAGCCGTGTAGTTCCGAACG
 GTGAACGGTGTTCGACGTGGCACCCTCTCCATGTACTCGCTGGCACCTCATATTGTA
 CACGGCGTATCTAGCATAACTCGTCTGACGTTGTACAGCCAAGTTAGTTTTCATTT
 45 GTTAATATTTGCCGATGTGTTTCGATGGGTCCGCTCGTCTTGGTACTTTGCCATAGATA

AGTCGGATTGCTCTTGGGAGTCGTACGCGCTAGAGGCCCTATTGCTACTATTGAAATG
TGTGAGCATGAAAGGTTCTGCGACATGTTACCCCCACAGGCCAACGCTACGACAAACA
CGGCCCTCCAGATGCTAGCGGATATCCCC

- 5 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 846>:

GNMPI27TR gnm_846

TTGCTCAAACCAAGnACAACTACAGACACGGCAGGGCAACAGAGAAATATTCCACACC
GAGCGAGCGTACTCGACGCCAAAAACAACTTACAAGACCAAGTCCGGCCCGCGGCACC
TAGCTACACGTTCTACGCGTTAACCCACAAAAACCGTAAAAAAATTCGCCAAAAACCCAC
10 CCCCACAACTAATTCTAAGGAGACCCACAGACAACGCAACACCCGAAACCAACGACGGA
AATAAAGCCCGCATCCGCGACAGACAAACAAAAATACCCCTCCACCGAAAAATAGCGCC
CGCACTGCACCAACACCCACACCCAAAAACCAACCCGTCGCCACACAGGATCCATCCT
AAGCAGCCGGAACAGCCCGCGGCAACCCACAGGTGTATGTCTACTTGTGCCAGTAGAAC
CGGAACACCGCCGCTCAACCCAGCCCTCGTAAAAACGAGAAAGACACTCTGAAATGCAC
15 CGAACACCATAAATAAGTCGGCCACAGCGTACCACAGTACCCGCGCAACCCGGTCAGCA
ACCGTATTAGGCAGCATGCTACTGTACACCGCAATGGAATAAACGTTCTCGCGACCGT
AAGTTGCTCTCTCGGAACACACTCCTAGTACCTAGGAGTACAAGACGGCAAGCCAA
CACTAATTGCCCTAAAACACCCCAATGGACCCACACTA

- 20 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 847>:

GNMPI28TR gnm_847

AAATATAATCCGTTTAAACTGAAGAGGCCGCGTCCGTTAAGAAGAACCGGAATAGA
CCGAATTCGAACCTGAGAATAGCCCGTTGAGTGACAAAGAAAGTGTGGTAGGGCGTCCA
CTCCCGTTCGTTAAACATGGCACAACCTGGGTGCCATATTGGTCCCATTTGGCACAAT
25 ACTAGATCCCCCGTTGATCCGGGCTCTTCGCTTTCCTTGGTGTGGTGTAAAGTTCAT
GCACATTACCGTAATCTAAACGGTAAAGTGACACATACTAGTTTGTAGTAGGACCGCGT
CTTGACGTGGACCATTCAAAACCTAGTAGTTACTAGGGAGGTGGACATTGTTCCGAAAC
AAAAAATCTAGCCAGAAGTTAAAACATATACAGAAAGCAAAAGAAAAATAAAAATTC
GTTGGGCAAAAAGAAATAAGTAGGTGCTTAAAGTTTGAAGAAACCTAAAGTAAATTAAT
30 TGAAGAGAAAGTTTGCAAAATGTTAAGAAAGTACCATAAAAAACATTAAGAACTAAAC
GACCACCTGAAAACTAAGTATACACG

- The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 848>:

GNMPI29TR gnm_848

CCACGGCCCTCAACCTTAGCGACACCACTAATCCACCTAGACGGGCACCCCTAAACTAA
TCCGTCGCACTCGTACACCAATTCCTACCGCCCCACATACACGGGCATCCCTCCCA
CCCAACCTACTCGAAGAGCTGGCAGCCCGCGGCACCCGGAACCTTAATTACAAGCCCC
ACCGGATTCGTCGAACGGCCCACTACAAACTCAGTGGCTACAGCCACGGCGAAACGCA
ATCTTATGCTTTAACCAGAAAAAGACCGCTCGAAAAATCAACCCACCCCTAGACGATT
40 CCAGACCTGGACCTAAGCGTAATATCAGCGCACACGCGGCCGGAATAGACCTAAGAACA
AATATCCGCTGCCCTGCAGTTAAGCGCCCCCTCCGCTGGCGGCCCTAATCTACTCCGAA
TTTCGTGCACCTCTTTGACTATCGACGCCATGAAACTGGCCCGCCGGGGAAGCACCCTT
GGACGAGCTTGCCGGCGCTCTACCTAGTTCCCTCTTTAAGAACGGCCAGGGTGATAAA
AACAGCTCTTGTCCCTAACGTCCCGGCCACCCGGCGCGCGGACAGATCTCCGTTGC
45 CACTACGGCAACGGCGCTATTTCGCTCCACGCGTTCCCCAACG

The following partial DNA sequence was identified in *N. meningitidis* <SEO ID 849>:

GNMPI31TR gnm 849

5 GCGTGGGCCCCACGGTACCCCAACGAGAGTGGCGCTGACCCGAGCGAAAAACGGCCGAG
CCCCCACTAGTTCCCGCTTGACCCCTACTAGAAATGGCAACCCCAATTTGGGTAGACAGTGT
GTGTGGACCAATTTGGTACAGAGCTTGAATGTTAACACCCCGAGTATGACCGGTGTG
GGTAAAGGCAATCCCAATACCCACGGCCTTAGTTAAGTACGGTACTAATTCGGTAAAT
GTTCGGAATGTCAGCATCTCCCTACCCTCCGACAGCAATTCGAGTGGCCGTTCGGAAT
10 GCGCATTTGTGACCTGTTTCGAGAGAGCCCTGGCTGGGACCAATGGAAAAATAGGCCCTTT
GGCAATGCGCTGGCGACAGCTTAACGAGCGCTTTATCTGGGTGGAGCCCTCCCGCTCTCT
ATGATACCTCTGTCTGACTATGTTTAAATGAATTTGTGACAGACAGCCCTCGGGGACGAC
CGGTTTGACGGTGGATAACCTTATGTGTGAGTGTGGCCGCGGTGTCAATTGTACAAC
ACAAGGGCGGCCCCGGAGCTGGGGTGGCACTGGACACCGAAGTGCTGACCCGGCAGT
AG

The following partial DNA sequence was identified in *N. meningitidis* <SEO ID 850>:

GNMPI32TR gnm 850

20 TGGCCTTTGTGTGCGGTGCGCTGTTTGCCTGTTTGTATCTGTTGCCCTTTCGACCTCGTG
GGGCACCGTTAAAAACCGGCGTGGTGGGACGTCGGTGGAATCTGGCGCGCTGTGTTGC
ACCCGAAACTTCTTTAACTGATCGTGGCGGTGGACGGGTGGTGGCGATGTCACAT
TCTCTTAATCTCCCCAGATCCCTTGGACACCTTGACCGCGCATGTGTACGGTAGACGTG
25 TGCCGTCGCGAGTCTGTTAAAAACCCCTCTGTTATGTCTCGTCGCCAATCATTTGTG
TCCCGGGGATACACGGTATCATAGTTCCCTTATTCGGACATGTATCTCATCTCATCATCTT
TCCGGGTGGTAGTAAAGATCCCCCATGGATATAGTCTGAATTCAGCGGTGGTAAACGGC
GTCTCTAGGTACTCGTAGTGTATGTCATGGTCGGAATCCTCTACCGGGGTGTGCTGATAG
TAGTGTCTCGCGCTCGTCTAAATGCTGGGTGATTCTCACCTGGATGTGTGTGTCACGTGTG
CTCGAAACACTCTGTGTCTCTACGGTCTACCATCTCTTACCGTCTCGTCTCCAGTCTG
CGCTGCTCTACCAATCTGAATCTTGTATGACGCTAGTGTAGCCCTTAGCGTTCTCCCGT
TAACGTTAATGGTCGGAAGCTGTT

The following partial DNA sequence was identified in *N. meningitidis* <SEO ID 851>:

GNMPI33TR gnm 851

35 GTGCGATCTCCAGACCGCATGGCTAGTACCGCTTAATAATTAATGGATCGGCTTGTGACTT
CGATTGACCATGGTCTGCTGGATATCTGGCTTGAAGAAGTCCCTTCGCTCGTTGTCACG
CGGAAAGTCGGCATATGAGAGGATAAAAAATTCGCGACCCATTAATTCGCCATATCCAGGT
TGTTGGAGACTATGTTGTGCTACTCTTCGGAGGAGAAATATGCGCGTTGACAAACACAGA
AATCATATTAATTAATCTCGTGGTTTGTAATTTCTGCTGGTGTATGGTGCACCGCTGCACGAC
40 CCGAGTCGGATAGTGGAATAAATCGTCTGGCTGGTTTGTATGTCATCGTTTCTCCGATTTGA
GGCATTTGAAAATAATCGTGGAGAAATATAAATCTCATCGTAAGTTTCGTTTACACAGGATTT
TCGGATACACGCCCTTCAGGACCGCTACAGCATAGTGGTACACGCCCGCTAGCAGCAAAATC
CGCTGGCATACGACGGCTTTACTTGTTGTTTAAACATACnTGTGCGACGCCGCTTGAAGCAAT
GTGATCTTCTAATCTACGAG

The following partial DNA sequence was identified in *N. meningitidis* <SEO ID 852>:

GNMPI34TR gnm_852

TCCACTCGGATAATACTTGTACTACTTCTATGTGATATTAGTACTTTGTTAATACTGGTC
 TCGTTGTGTGTGACGAAAATAACGGGCTCGTATAAATCGATTACTGCTGTTTTAAACT
 CGACGGTAATGTTGACGATGGAATTTGTTTGGCCCCGATTTGGAGTACTTCTAACTGC
 5 CCAAACCATTTGGAAGAAAGCTCTACTTCTGCTCTGGTGTGGTAGTAGCCCTGGAAAAACG
 TTATTACCGTTGTCCTCCGGGATGAAGTTCCGTTGATATTATTACTGTTCCGTGTTTCGA
 TTAGTTGATGATGTGAACCATCGTTGGCGTAAATTTTGTGTGACCCGGCACTTGAAC
 CATCGTAGATTGTAATGAGGTGAGAAAGCGGTATCGGCCCTCGTAATGAGATCCCTG
 10 GTCCGAGTACTGAAGAACTTAAGTTCGTAATTGATCGACGATTACTAATGGTAACTTTG
 ATCACCCTCTGTCTAATCTGTTAAGTTGCGTAAGCTGCGCGTCATGAACTCCTAGTT
 AATTTGGCCTGTTTACGA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 853>:

GNMPI35TR gnm_853

CTGGCCTTTGCCGTGTGCGGTGSGGGTGCCCGATGATGATGTGCCCCCCGTCGCCCGGT
 GCGTGGCACGTAGGAGCGTTGTCTACTCCGTGCTGTTGATGAGTTGGCGGAAGCAGG
 CTACCTCCCCCAATGTGGTATCCCGTGGTGCTGGGACATACGGGCTGAGACAGA
 TGACGCTGGGCCCGTTCCGCGCCGGATAAGCGTGGGTACCCGCTGCTGGTGGCGCTTGA
 AACGGAGGCCGACGCGTGTGTTGCGCCCCGTCGCCCTGGGACCGAGGAGGTTGTGGTGA
 20 CGTTGCTCGAAAGTAGGTAGGTGATGGTGGGACGCCGCTGGAAGGTGGCAATGGTTAGTT
 TGAGTGAGGTGAGGATGAAGTCGCTGTGTTTAACTTCGTGGCCGTGCCTTAAATGGCGG
 GCGGTGTGGCGGCCGATGGTCCCGT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 854>:

GNMPI36TR gnm_854

CTGGCTTCGTAGCGTTAACTTAAAGTTGCGGTGTCGAGATTGTTGCCCGTGGTAGAAT
 TGGTACTGTGGGCCGTAGGGACCGGGCAACTGCTGAAAACAATTGTTAGGCCGTTGTAA
 GCTCGCCCTACTATGTTGAATTTAGTACACTGATAATGAGGCCGCTGCAGTTGAAGTCG
 TCGTTGTGCTGTACAAAATAGCCCTTTGCCGTTGGTCCTGCGGAACCCCTTTATAAGC
 30 CCCCCCTACCGCAGAGGGTTCGAGGAATCGAGGCCGCCGACGCGATGATGCCGTTAGCC
 CCGGTACGGTAATATCAAATGGCTCGTTGTGAAGAAAGTGGGAAGTCGAGCATA
 CTGTATATCTCGTGATGGGCCGTATCGACGGGGCTCGCATGCTGGCAACGATGGGG
 ACGTTGAATCTCGTCCGATCCCTAAAAACTCCCAAGTTCCTCCTTAAGTTCAAGTTG
 TGACAAAGACGGACGAGGAATGGCCGTTCCGCTGAAAGAGGTCCCAAGACACAGGGA
 35 ACATTGAGCCCTGGGCAATCCTGATGCAACGTGTGTAGGCCGAGGGCGGAACCTTAAG
 TCCCTTAAATGCCACGTTGTTGAAC

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 855>:

GNMPI37TR gnm_855

TATTTAGATACAATGGCTGTGCCCTACTCCAAC TAGTATTATGGTGTATACAAC TAAGST
 CATGTTTCGTTAGTACCGCGCGGCTGACGTCTGAATAAAGGTTAGAGTGAGCGGACGCTTG
 TTTAATGGGCTGGCTATGTTTGGCAGAGGAAGCAGTTTATAACGTTATGGTGAAGAAG
 GCTGTAACTAGCGCGGTGGGACGGAGCTGGCGCCGTTGAAAGGCCCGCAGAAGACGCTCG
 TTTAAGCTCCGAAC TACAAAATGCGTGATGTCGTCATGGTACTGATGGTGGCTAGGACG
 45 AATAAGGTCCTAAATAATAGGCTGAAGCACATTAGATGTTACTACTGTTCTGTTTGGGA

ACTAGTGGTCTACAACGCGTGTACATTGATCGTGAGGCGGGTGTATTGCTGGTATGG
 GAAAGGACGGCGCCCTGTTGATCCTCCAGTAGCGCGTAATAGGCGCTGGTACTGATA
 GGGAACCTAGTCCGGCGGCAACTATCCTGGTGGTGACACGGTAC

- 5 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 856>:

GNMPI38TR gnm_856

ACTGAACCTAGTTTGTAGGTGATGTGGCAAGTACGGTGTATAGCTCTCGTACACTTAGT
 GTGCATAGACATGGATGGACCCCTCCTAACTGGTAAATCGCGGCAACTGGTAACTTACTGG
 ACGACCCCTCCTTGAACCTATTGATGTAGCAAAGTCTGGCGTGGCGTAGGCAGAAAGGACC
 10 ATTGTTCTTGCCCTTGTAACCGTCTGGGTAAAGACCGTGGATGGTCCCAAGTATAGGTGGTG
 GTGGTAAATGTTAGTCCCCCTTTGCACGTCCTCAAGCGSTGGCCGACACCGAGCTTGATA
 GTGGCAAGCGGTACGAAAAAACTGGCAAAGACGACACAGATTGCCACCCACAGTTCAACT
 GTCCCTTCAAATAATGGATAAAAAATCGTATTCTTGATTGTAAAAACGTTGCTCGAAGGC
 GTAGCCCTTGCCCGCTTGGTGGCGGTGCTGGGTAGTTGGGTGGCCCAACTATTCTCGTGGT
 15 TGTGACCGCTGGTAGCTAGTAGATCGCTGCAACTGGTAATGCCCGTTGGCCCGAGCGCC
 GAAGAATTAGTTGCTATGTCAAGGACTGTGCGCGGTAGCCCTTGGAGTGTCCGCTAAACT
 CCTGCCGATGGTAATGATCTGTCGTAACCTGGCG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 857>:

GNMPI39TR gnm_857

CTGTGACCTTTGGTGC CGGGTACTACTAACCTGCTGAAACTGCGTAACTGCGGGTGGTGG
 CTCCTTACC CGGATGCGCCCTGATAGCATCCTGGTGGCGTGGCTGACGAGCTCGGGG
 TAACTAGTGTCTGCTATTTCCGATGCCTATAATAACTAAACGTGGTGGTAGTCTTAGTG
 TGATAGAGGTCTGTTAAGGTGTGCTGCGTTGTCCCTGCGGTTGGCCCGAAGCTACGATGA
 25 TCCTGACATTGCGTGTTTCGATAGGTTGCTCGAACACTGGGACCGCTGGCGGTAATGATGA
 TGTGTGTGGTCCCATCCCCCGTTGTTCCGCTGGTAATGTGTATGATTACTGGCCCGTTGC
 GGACGCTTGTAAAGTCCCTTGGGTAGGTGTGATGAACCTAGTTGTGTGGAACTAAACA
 TGATGAACCTGGCTACGTCCCGAGCCTTCTCCTGTCTAATGTCTGTGTCCTGCCCTTAG
 TACACAGGGAACGTTGCTCCCAACTGGACAGGTAACTCCTGTTTCGATGGTCTTATAACCT
 30 TCGCCCGCTTCGACGACACCTTAGTTCGTTCCCGGAATGGGGTAGTAGGACGCTCAA
 GAACCCCGCTTACAGGGCGCTCCCTGGGCCCGACGGCCTAACTAACTGAGACGTTTCTC
 CTAACACCTAGTAGGTACTACCCACCTCG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 858>:

GNMPI40TR gnm_858

CTAGTCTGCTTCCGCTACACATCGTATACTGCATTGTATGTGTTTCGCTGAAAAACAA
 GTGCAGGGCCCGCAAGCCGCTCGACGTTGGACACGTTGGTAGTCCGTTGCTGCCAACTAAT
 CGGCTGGACATACTTCGTTTGTATAGATCCAACTTTGCATACAAAACCTGTGACTGCTCTC
 CCTTGAACGATGAATCTGACCGTGGGTCTGCTTTGACGAAATACCCCACTGATTGGATG
 40 TCTAAGTTGCACCTCCTTGAAGTCTTTGCCGTAATCTCGCTACAGTGGGTGACGTAGCT
 CGCCCGAGGAACCCAAAACACTTCGTTCTCGTGCTCGGCTACCACTCGTATTAGTTGCT
 CTCCTTATCCGTTGTTTGCCTAAAACATATCGGACGGCCAATTTGGGCTCTAAACAC
 CCTCCACTTGTATCTAAGTTCCTTTATAGGTGCAAAATATACCACTAGTACTAGTGGGTA
 AATGGTAGGAAAACTAGGGCTACAGATCGTAGGCCGTTGACCTTGCCTGAGTGTACT
 45 AGTAAATGGTAATGGTAGATACTAGTATGTTTATACAATGnTCGTTATGCGGTGTG
 TCTAAGTTCCCGCTTTGAGAGGCAACACCGCCTA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 859>:

GNMPI41TR gnm_859

5 GCTAACGTCGCGACCCCTGGCCCTATCTACACCCCCCTTCCCGCTGGCAAGGGACAGGAC
GTGGCGTGGGTCAAACCTGTATCCGTTTGTACACACAGCGGACCAATAAAAATTAGCAT
GGTGGCGTTCTGTTCAGTCTAAAGAGAATGACCTCTCAAGGCGTGAAGTATTAAGCGA
GCTGGCCTTGCATCACC CGCATCGCTCGTGGTCTGTGCTCCGCTTCGACCCCGGCCAA
CTTATCACAAAAACAAAGAACTACAAATGAAACCCACCACTATACACCCCGGAAAA
AACACTACCCGTGCGACGCCCCCAAGTAGGCACCCCATCACCTCCCATAGAACTGGGACC
10 CCATTAACAGGGGCTGTAGCTGGTGGATAATTGTCTAAAAAACACCCCGTGGATATT
AAGGGCCGCTACATCGTTGAATTGCTTGGCCCGTACTTCGACCGGGCGCACTGTGCC
CCGCTTCCACACGTTGTTATCCACCCGTTATCCCTTGACGAGGTGGCCGTTGAA
AACACTTTTATAGTTCCTGTGGTAATCGTCTGTGATGAA

15 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 860>:

GNMPI42TR gnm_860

20 CCCATTGCGAAGTGCATTAAAAACCGGCATCCAACCTCGACCCCTTACTGTGCTTCAC
AGGACATCTTAAACTAATATAGGACCCCTTCTCCGTCTTCCGAGAAACAATCGGACAG
TATTCGAAACGACCTTGCTTAATACCTCCGAGGACCAACGCCCGACCAAGCATCTC
CATTCCTAACGCGAGCCCTCACGCTTCGAAACACGCCCTTCCGAGTCTTACTACGAAACCC
CAGCTTTAACAGACCCCGTCCCAAACTAATACCGTGGGCCCGAAATACCCCTCTTACTCA
TAGATCGAGACAACTCCGAAAGTAGCGCCACGTCGCGAGGAGCTCGAGAACTTTATCAA
TTGTAGTTCCTTTTGGCCCGCTTGTCCCGCTAGGCCCCCGATCCCGTAAATGGTAGGA
TGCCGATAGGGTCTGATGGCCCTGCTGGTACCGGGGCCCTTCGTACTTATCGGCTAA
25 TGGTCTGTTTGTGTCGACAAAGGGGCCGAGTGTGTGGTGGTATGTGCGACAAATC
TTACGTGCGCGTTTAAATGGCTGAGTCCGTTACCGGCTCTGAATACCCCTCGCCGCTCC
TACTGGTGGCTGGAGAAACCGTCTGTGAGCCGTCG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 861>:

GNMPI43TR gnm_861

AACTAGGATGGACGGCTACATGGTACGGTCCACCTTGCCCTTTAAACCTGCGTGGAAAC
GAAATCTCTGGTTCTGCACCGTTAAAGTACCGGCTTAACCTCGAGTCTGTTGAATGA
AC

35 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 862>:

GNMPI44TR gnm_862

CCGTGTTTAGCAGCGGCGGAGGCAGAAAGTCTGTGTGGCGCTGAGCCTTGTGGTCCCA
TGCCCGAGGTGACCCGCTGCCTAATAGTAGCCCTTGGCGGTGCTACTTAAAGCGCTGGTG
AGGATCCGGGTCCCGGTACCGTTGGCCCCCGTGTTAAACGCCATAATGACCTGGTGAGC
40 GTGAGGAACCTGTTAGTGAGCTTTAGTGTAAACGGCCCTCCTGAGGAAACCGCGAATA
CGCCCTGGCGTAGAATTGCTTGTGTTGGCCCTAAATACATTGTTGTGCTACTAACCGA
ATGACAGATAGTACCCCTGTGTCCGCGTTGAGCCTTAAACCGGGAATAGCTGGCTAGG
CAGCTGTGTAAGATACATTGGCCATGGAGACGGCGCTCTGTGCCCCCTAGATGATT

AAGTCGAATCCGGTGGTCCCTCTAGGAGTGAGGATGTGGACGCTGAGGTTACCGGCACCT
AGCCTGGTAAAGGAGGTCCCAATCCGGTGAGTAGGCTCCGCTGCGTGGATGGCCCTG
CTGAGTTAGAATATGGTAGGTGCGCC

- 5 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 863>:

GNMPI45TR gum_863

TACCCGCGCAACTTATCACACCCCTAAACCTTTCTCTCCCTACTACCACCCAAACGCTCACT
ACCAACACAACCAATAAAACCCCTACCCCTTACATATTGACGCAGAAGAACAAATAAACCAAC
10 TCACCCACAATACTTGACCTCCTCTACTGGGCCACATCTACTAGAAACATCTATCGAAA
CACACGTTCCCATACGCGAAACATCAGATAGCCGAAAGTAAGTACGTAGCCTTCGCC
AAAAATGTGCGCAGAACCCCTTGTCCCACTCTAAGTGGATATGGCCCTAACACGCTCCCTT
TCCTAAACATTAAGTCTAAATTCGGCTTAGTTGACCAATTCACACTTCGATTGCCGTTG
GTGTGATCGCTGGCCCTGGTGTGATGCGGTGCCCTTTGCACCCGGCTGGCGAAATGGCG
15 GCGGTGTCACGCGCCCAACCTCGCACTGTGACGTGCGCCACTGGTACTTTGACGACCCC
GGCGGAAACGCTACTGGATGGTGAAGAGTGGCAATGTGTGCGACGTGCCTGGTGGTTT
GACGAATGGTAAATTTACGTTAAACCCCGAAATCGGCTGGTCGGACGGGTGCTGTGGT
GTGCTGGTACTACGGTCCACCATACG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 864>:

20 **GNMPI46TR gum_864**

CCCCGGAATGACCTTTTCGTAAGTCGTCGCTGGTGTGTAATGTGCCGAAGCATG
CGCTGGTGTAAATTGAATGGGGTTGCACTGATAAGTCGGGTAATAGCCTGGTGACCTAG
GAAACGAATTCGACGGCAGGGGTCGTGGCGAAACGCGTCTCTTTGCATCCCGATGGGT
25 GAGGTGGCCCTGTTGCCCGAAATGGCGGTATGTCAACCTTACAAAAATGGCATGTTGCCG
GCTAGTTTGGTAAGGGCTGAACACTCGACTGACACGTTGACGGAATCCGCGTAGAAGGTG
GAGGGTGGTGCCTCGACGCTGGTGATACTGTTTAGCATAGTTGTAATACTTAAGTTGGC
ACCGTTCCACCGCTGGAAGAGTGAATATGTTGTGCTAGGCGCGGTGACTGGGTAGT
AGGGTGTAGGCTAGATGGTACCGTTCTGAGGAAAAGTCGGTGGAAATCGTCGCTGGAA
30 CTGGCTGCTGCACCTTGTGTGTCGACGTAGTACGAAGATACCTTTCCTTCGACATAG
GGGACCGTTTCGTAACGCGGTGGAAGTTAAAGACCGTGTTTCGTTCTACCTAGCG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 865>:

GNMPI48TR gum_865

CTGGCATTGCTGCGGTCCCGTGGGCCCCACTGGCAACGCCCTAGATGGTTCGCTTA
GACACCTTGCTAAAAATTGTGTTACCTGTGCTCGAATGTTATACCTGCCTAGTTGTC
GTAATCGTGTGTAGGCCCCCTAGTAGTTTCGTCGCGGTGCGCTAAACCTTCGCGGGACCC
75 TGAATTCGACCTCGTAAACTGGTGACCAATCTTGCTCTAATTGGCCCCCTGACCGGC
AGTCGTTTGTATGCGCTGACCCCTACACCGGCTGAGTATGACGAAACCTGGTGCCCTAG
TGACGGGCGCGGCCCTGAGGCTACGGTCCACTCTCCGCTACTACTCGAAAAAACC
40 ACACCCACTTAGTAGGCGCGCTAAAGTAACCCGATAGCCCTCCGCTCCGCGGGCGCGG
TCTGGTAAACGTTTACCAAGACAACGAGAACGATCCGCAAGCCAAACATGCGCGAAA
ACACCCCTGCTCGTCGCTCCTGGGTAAACACTAGATTCCCGTCCACAGTTCAAAAAACC
AGTCGCCCCCTACATAGGCCCTCTAGTAATACAAAACGAAATTCGCTCATTTCGTGACC
TCTGACAGTCCCCCTAACATCTTCCCAAGCGAAGCGACGAAAAATCCCACCGGA
45 ACTATTCGCCCCCTAAGAACATAA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 866>:

GNMPI49TR gnm_866

```

5  GGGTCCCCGCCTCCACGATAATCGTTACTCGTGGGTCTTGAGCTGCTCCGATGCTTG
   AAGAGCCGTACCATGGCGCGCTAGAAAGCCCCAGAATGGGAGATTCAGCTTTCGTGCAA
   CTGCGGGGTACATCCTAGACAAGTAAGGGAAAAATTCATAGTAGTCTGCTAGACATCTGCAG
   AATCCTAAGTACCTGCGTCCGATCCGTCAATATCTTCTTCGCGTTCCCTACTACTGGCTG
   CTGCGTGGGCAGCTTGCTTCTCTCTGGCACTTACTGGGTAAACCCGCTCTCTAGATCTG
   CATAATCCGTACTATTAAATTCAGGAATATCCGAGTCAATTACTTCGAGTCAAGCTTAC
10 TTACTTCTATGGTTCGATCCTTCGTAGCGATATGCTTATCTAAATCTCTTCGTGAGGCT
   ATTGGTTTACTGGGGTCTCCCGTCAGGCTTCTCTCAGGGGCGCGGGCTTCAATCTTGG
   CTTCTCGAAAGATCTCTAAAGAGTCTCTAATTTATATTAAATTTAGTATCCTCACTACTCC
   TACCTTAGTAGTCCGAGTCCCTCTAACGATCACTCTCAATTTAAATCTAGCATTAC

```

15 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 867>:

GNMPI50TR gnm_867

```

   TCCTTAATGCGTCTCTCGAGTTACTAGAAGTGTCCCAAATTCCTAAGAATCCTAAACCGA
   CTGAGTTGCAAGCAAAATTTCTTTATATGGGCTCTACTTTCAGATAGGCTTCTTCAGC
   TTCTTAAGATCCCTCTCTCTGTAGTTTGCTTCAGTTCTTCATGATCCTCACTCGCTTCA
20 AAGCTTTGGGCGCTCAAGTGGTCTATCCCTGGGCAAAATAGCCCAAAATCTAAGCTTC
   GTGCAACTAGTGCCCTCCTCCTGTGTCTTGCAACAGCAAAATCCCAATAGGCTTTTGT
   TAAGTCGGAAAAGAACTGTCAAAATAAATTCAAGTGATTCTTCCAAATTCAGGAGCAA
   AAATAAAATTAACGTGCCCATTTGTTTTATTCTTGGGGTTATGCCTGCTGGCTTCTCGA
   TTGCTTTGGGAGGCGGAGACTCTCAAACCTCCTCCTCAGAGCTGCTAAGCCTATATCTC
25 TCGTCCCTGCGGTCTTGGGGTTGCTCTGAGGGTCTTGTGCTGCCCTAGGGCCCTAC
   TCAGATTCTTTCGGGGGCTTCGGGTCTTAACCTGCCCTACCTAGATCT

```

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 868>:

GNMPI51TR gnm_868

```

30 TCGGCTTAAATATCTTCTTGGTCGCGGTCTCCTCGGTTTAGGGGTGATATTTTGGCCCT
   CCATGGTTTCTGGCATCCTAATTTCTAAACTCCTTGTGCGGCTTTGTATGCGTTCTTCC
   GGTCCATCCTCGGGTTTGGGTTGCGTTTGGAGAGGGTAATTGGCTTTTAAAGTGTGAGT
   TATCGGCTCTTTTACTCGCAGTCCCTCAATCTCCTCCTCGGTGGGCATCCTACCGATCTGA
   TTGCTCCTTCAGGAGCTTCTTACGTTTCATTGCATTGCGTCTTCTATCATACAAAAAC
35 TCCTACCAAGAATTCTGAGTACCTCAAAGCCTACTAGTCTATCATAGGGTTTCATATCTG
   GTACCTCCGCGTCAGGGTAATTAACTGTTTCATAGTCTCTGATGATTCTCATGGGGATCC
   TAATAACAAAGTCTTCTAATCGTAATTGTAAATCTTCGCGAGCCTGCCAGGAGCCTCC
   TACCTCCTCCTCCTACTTGCAAGCTTCCTTGGTCCGGTGCAAGGATTACATCTGCGT
   AAATTTAACTCCTGATAAACATAAATTCGAGCTTTGTAGCTTCnCTTGGGTCCGTCAAGC
40 CTCGAAAAATATCTCTACCTCTAAAGTCTCCTCGGTTCTATAAGGGATTTTCAGTACTTA
   TCATAC

```

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 869>:

-870-

GNMPI52TR gnm_869

TGGAACTCGTCCATAGGGTTCTCTCCTCTGCGGTTCTGTCAAATCTTTCTCCCCAGCT
 CCTGCTCGGGGTTAGTCAGAACTAGAGGGGTTCCATCTCGGTCCCTCCCGGGGTTTCC
 TCCTTCTTCAGGGCGGGCTCTGGAGAGACGCCAGGAATAAAAAAGTACCATAACTCATCA
 5 ACTTCTACATACGATAAAGACGATCCAATTCAAGTATGGCGGCTGGTCTATTGGACACA
 AGTCGGTGTGGGCACTGAACCTCACTTAATCTTCGATGCCGGGGCGGAAGTTATGAGAA
 AAAATATGCTACTAAAGTCGGGAAAAATAACTCGTTGGGGGTCGGTCCCTCCAAGATCCT
 ACCCGTCGGGTTACTACCTTGGGGGCTTGGCTTCGGGTCAAGGGCTCTTAGCAGGGGCT
 ATGTCCGATCTTTTCGCTCTGTGCTAATAGTCTCCTCCGATCTTCGTCCGTACCTCTAC
 10 CCTCGGTAGTAGCAAGGTCAATCCTAAAGTGGTCCTACTCATCCGGGGCTCGGTATCCT
 GGTATGTCGGCTCGGGCTAGGAACCTCACCGACGTCGGCCCC

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 870>:

GNMPI53TR gnm_870

GCCCTCAAACCTATCCGAAAACAAGTCTTGAGGGCCCTACTGGTCTTAGGGATTAGAGTA
 ACTGTCCTAATCCCTCTCGTCGTAACCTTAACGTTTCTTTTGGATCGCAGGCGCTCTA
 ATAGGATATTCTTCACTGGCCCATCAATTCTGTAGAGTACTGCGCTTCCAAATTAATTA
 15 GTTCGGCGGTTCCGCAAGGAAACCCCAAGCTAAGCAATTGGAAGAAATGCAAAAATAAAT
 GCGGTTCTTCGATCCCTACTCGCTCCGAGGCTTCGATTTCGAGAGGGCCTGGGGCCGCT
 20 CCTGGTCAGGTTTCGGTCTTAGTTCGCTGCAAAAGTACTGGGCTCAATTAACAAAGCTCTTA
 GTTCTTCGGGATGTGGGAATCATCAGTCAGCACACAGGGCCCGTCGTGCAAGAGGCTGC
 GTACTGATTAAGAGGAGCTACATAGTGTTAAAGGGGGCCACGATCTGAAGCTCGGTC
 CTCATCCGCAAAATACTAAGAGTGAGTGCACGATGGAGGCCGTGGTAAGGAACATGCTCT
 GCATGATCATCCGAAGGGCGTGTCCGTCGGAGTTCATT

25

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 871>:

GNMPI54TR gnm_871

TAAACTTGGCAAACTACTTCTCTCTTTCAGCGGCTTAGTCGGCTTCTACTAAACGGT
 TATTAATGCATTAGTTGTCAAGTCTGCCTCCATAAACGTCATTAATGTAGTCGTCTCTCC
 30 TCCGAGTCTAAATATTGGTTGCGGCTTCAACCTAAACTAGTCTTAAGTGGGCGCTCCA
 ATATCAGGGCCGCCAACAGTTAAAAAAGGAGCTCAAAAGCCTCTTAAACCGTCGCGT
 TCTGCTTCATTCAAGCTCGTCGGCTTAACTTGGGCTTCTCAGCTCCAACTGCGCGCA
 AACATAGGCTTCTCAGCTCCAACTGCGCCGCAAAACATAGGCTTCTCGGCTTCAACATC
 ACAGCAGGGGCCATAGTCCGTTCAAAGTCTGCTTCTTCGGCTTCAGGCTCGAAACTTC
 35 TTCCGATCCGTCGGGCCAATCCCTTCGCTCCTCGCGGTCAAGGCTTAAGGCTCACTTC
 CGATCAAACTTTGGCTCAAACTTAGGCTTTAACTAACTCGGTGTCAAGCTCCCTTCCT
 CTCATATCTGCTCCTCAGGCTTAAAGGTCTCGGATTCAATAAGTCTGTAGTAGGTTA
 TCTCTCTCTCTCGGTTGGCACGGTGG

40 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 872>:

GNMPI56TR gnm_872

TCCGGTCGTTATAAGAAAACTCCGGTAGCCTCAGATCTCCCTCAGGGTCATCTCTTC
 TTCGGGCTCTCTCCATACTCATCTCTCCCTGCTCCTCGAACGCTTCAGAGGCACCGT
 45 CCTCACTACGGGGGTCAGGGTTTTCGCTCAGGGCAGGGGAGTGGGCGGGTCAGGGTTAA
 CAGCCTCTCAGCGGGGCGGTATCCGTAGGGGCTCAAGAGTCACCTGGTGTCTCTAC

-871-

CGACTTCATATTACCTCCCTCTCGGTCGCGAGCCCTACCGCCTCTAAGGTGGCGTTCGT
 GACCCGGATCTGCTTGCTCGTCTCTCAGCACGTTCAATAGTACGACAACCTGCCGCG
 GGGATTTCCTATTGGCCCTTCACTACGTTACGATGGTCTTCTGGGTGAGGGTCACCCA
 CAACATGGGGAATCATGGCTCGGGGGGCAAAATGGGGGGCTACCGGGCAATAAATACCTC
 5 TCGCATCGGGCTATGTAGAAAGAGTGTGGTAAGAGTGGTCCGTCTTAGAGCTTCGTTCAA
 TTCGCGGAGAGGGTACATCTAGGGGCCAGGAGGTCCAGGGGGCTCGATGTCAACCTG
 CCAGA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 873>:

10 **GNMPI58TR gnm_873**

AGGCCCTCTCnAAnAAnAAAGTTGTCTGGGTCCTTCTACTAGTAATTACTTGCTTTCTGT
 CATAGTTCTCGTAATATGGGCAAACTAAATCTCAGAAACGCTGCTTCGCGGCTAACTT
 CAAACGCTTCAGCTACACCTAATCTTGGAGGCTTGGGCCCCAGTTCTTGC AAAAATAAAA
 AGTCTCTGGAATAAATATCAATGCGGGGGACATCCTATATGCAAACGTTAACATCAACCT
 15 ACTTACTGTGCTGGCTGGAGGCGCCCTCTAAATCACTCAAAGTAGGCGTCAGGGTCGCG
 CTTCGCGCTTCCTCCGAAAATTGGCCTGCGTCCGCTCTAAAGCCTCAATAAACCTACAAGT
 GATCTTGGTCAGAGTCTTCAAAATCTTGGCTAATTGTAATTTCTCGAGCATTTCTCTT
 CCATGCATTAAAGATTATTTCAATCTAGTCCTACTCAATATCAGCTTTCGAGTCTTTCA
 TGCCTACTAAACTTCATTTCGCGCGGCGCCATCTCTTGTCTTCCGGGCCCCATGGGA
 20 TCTCTAAGTTTCATTGTAAAGATTCTTAAGTTCnTCAAAATTCGCTTAAATGGGCCCCA
 TACTAATATACTAGTTGTAGCTTC

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 874>:

GNMPI59TR gnm_874

ATTATTCTCCTTCGATGCTTGAGTTTGTGCGTTAGCGGTAACCTTCGTTGCTGTCCAT
 AAGCCTATACTTGTGTTCAAGTTTCAATGTCAATATACTTGTAGGATTTCATAGTCAGGGTA
 ATTGCGGGGCTTCGGGGCATCAATGCAC TAGTTTTCAGGATACATTGGAGCTTCTGATT
 30 CTAATTCCTGCCCTCAACATAAGATTTCGCTGCAATGCGGCGCAATCGAGGAATTCCTAAT
 GCATTCAAAAACCGGGAAAAAGACACAACTAGTCTGCTTCGTCGGCATCTTATTATGGA
 GGTACATTGTCCTACTAAATACCTGTAACCTTAGACAAACGGCATCAACAACCAATAAGTA
 CTCCTGTAATATATTACGAAACCATACTCAGCTTTCGGCCAGAAACAAAAATCnTG
 ATAAATGTCGGGATAAATAATAGATTTCGATTACAGTCAAACTGAGAGTCACAAATGCT
 ATAGGATTTTTTC

35 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 875>:

GNMPI60TR gnm_875

CTCCTCCTAACTTCTAAAAGTTTTCATACTTCTTGTAACCTTCCTCATTTGTCGAGGTGGT
 AATATTCCCTCTATATTCTGATGTATATCGTCCATGTGATAGTCCTAATCCTCAAGGT
 40 AGTTAGCTTTTACTACTCCTAAAAATAGTAAAAATCAAAAATGTGTTATATTCCGGGAT
 CTTAAAAATGATTGTCTCTATAGATGGGGGGATACAAGCACTTCTTCTCTCTCTC
 TTCCAGTCTCCTAAAAGCTTCTTGGAGGTTCTGCGGGTCCGTACTCAGCACAAATATCGT
 CAAAGAACCTCCCAACCGGGGGCGCCGCTAGGGTCCAGTCGGCAGCATCATCCGATCTT
 TAATACTCAAATTACTCACAATAATAGTCTTAGCTCCGCGCTCGTCGATCGGCTCAGCAT
 CCTCGTCCCGGTACTCGGGTCCCTCCCGCAGCGCAAGGCTGGTCTGGTGGTCATCAT
 45 GGGGCTTTACGGGCTCTAATGTCGGGCTTAGGTCCTCAGTCCGTCGGTCCGGTGGGCAT
 CTCCTATCAATTACGCGGCTCTACTCGGTTACGGGCTTT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 876>:

GNMPI61TR gnm_876

```

5  AAATTCGTCTTCTCGTAGGTTTCTTACCTCCCAAGTGACATAGGTAAGCTGAACCTAAG
   GGAGTCCCAAGCATGCAAAATGTA AAAAATGACAGGTTTATGGGTCGCCCAAGCATCCAAG
   CGACCGGTCGCCCAAGCATCCAGCTACCGGGTTCGAGCCAGCCAGGTCGTAGGTTTCAC
   TACATCCCAAGTACATAGGTAAGCTGAACCTAAGGAGTCCCAAGCATGCAAAATGTA AAA
   AATGACAGGTTTATGGTCCGCCAAGCATCCAGAGACCGGGTTAGCTCCATCTCGGTCC
   AGGTATCATGCTCTCCAAAGCATCCAGGGGCCGCGAGGTTTGA AAAAAAGAAAAATA
10  GGGCTAATGGGCGAAAAAGAAACCTGCGCGGGGAATCAGCGCGCAGAGGGAAGGTGAC
   AAACCGACTGAGGGAAGACGGATTGGGGTGGAGGGA A AAGACTGGGTGTAAAGGTTAGC
   AATCTGTAAAGATCAGAGCTACAGCTGTGAGTCAAAGGAACGGGTAATAGGGGCGGGAGG
   AATAGGGGAGGGGACTTAGGGGTAAGAGATTTTAAAGAG

```

15 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 877>:

GNMPI63TR gnm_877

```

   GCCTAAAAACAGCTCGGGCTACAGTTGGGCGTCCCGTCCCAACCCGCGGGGCTACTCCA
   GGGGCTTGAGAAGCACACCCAATCTAAATTTGAGTCTCCAGTCTTCTCAGATCCCGGG
   GATAGGAGTCAGTTCTGTGCAAAACCCGGGAGTTGCGTACCTAGATCCCTCTCAACTCC
20  ACCAGCGCGTCTCTACCATCAGCACGGGCTTCGCAACAAAGCTCCGCAATTCCTCAGC
   CGAAGCATCCCTAAAGTGGCTCCGGTTCTTTAGGGTACGCTGGGTTTCAGGGTCATCATG
   GTCGTGGTTCTCTTCGCGAGTAGTACTCGGGGCTAATCGGCCCAATCCTCATCGGTT
   CCATCCGTCGAGAGCGCTACATGCTTCTCTTCAGCACTACTAAGAAAGTCCCGCGCTCT
   CTGGCGCTCCTAAAGCGCTCATAGAAATCTTCAACCAAACTTCCAGAACCTAAAGGTC
25  CCCCCTGGTCCCCGCGGCCCTCTCCC

```

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 878>:

GNMPI65TR gnm_878

```

   CTTGGGGTTTCATAGCTTGGTTCTTATAACTCTCGGCGACTTCTTGGTCATACAACCTCGT
30  TAAATGGGGCGGGGCGACTCGGTTCTATCCGGGTAGTAGGCAGCTCCCGGGGCAATCG
   CGCCAGGCTAATTACTTCGTGTAAGATCATTTTCGGGCGGGAGTCTCTAATGACAGTTA
   TCTACTAGAAAATATTTTCTTAGAATTAGATAAAGTATGCTTGCTTCTATTCTTTGGGCTT
   CGGCATGCAGCTCGCTGCCTTCCTTTGCTTCTTTAGTATCTTCAGGCTTACGTCCTGCTT
   GGTAGGGGCTTCGATAAATATTGCTTCTTCAGGGCTATCTTGGGCTCTATTTCGATCT
35  ACTTCTCTCTTTTCGAGAGGGGCGAGTCATTCCCTTCTTCAGCAACTCTACTATAAAGG
   GGCATCCCATCCAGTCTCCTAGATATCGTCGTCTTTTGGCTCCTCCTATCTACTTTAAA
   TAAACGAGGGCTTCTAGAATCTGGGCCCTAGAGAAAATCTGGTTCTTGTCCCGAGACT
   TAAATCTGCTATCTTTAACTAAAAGTCTTGGTCTAGGCTGGCACTAAGAAGGTCGATAC
   GTTTGCTTCCGAAGGGGCGGGAATCTAAATCAATTCCAAGTTCTCGGGGCTTCTAAG
40  TACGGG

```

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 879>:

GNMPI66TR gnm_879

ATATACGAGCATATAGAACTCSTAAGTCGCGCGGCTTTGCGGGCCACCCAGGCAATT
 GGTAAAAAGAACGGGGCAGGTGATTCTTTTACCCATACAGCGTTAACGCTTCCCGGTA
 ATTTCAGAACCAAAGGGGAAGTAAAGACAAGTAACTTGCGGGAAAGGGSCGAAAGCTCCTA
 5 GGGTACATCTCTAGGGGAGCTTGGCTTTGTAGCTTCGACGCGGTACGCCATAAAATCTCTGG
 TCCTCCGACCTCCGAAACTCGGTCTCTCTCGCTCTACTGTGTTAACTGCGGCTTCACTC
 AGGGTTAAAAATCTCTCTCCCTAACATTCCACTCCGCGGTTAAAAATCTGCCATACCGGT
 AAAATCCGTAGCTTGGTCCCAAGGTCCCTACAGGCTTCTTCTACCTAACTACCATCCAG
 10 CCGGTACATCTTAGCTTGGTGGTTCGGGTTAAAGGTCGCTCCAAGCAAATGTGTCCTT
 GTCGAGGCTTAAACTAGGGGCGTTAAGGTTGCAACTGCTTCTCAATCAAGTCCA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 880>:

GNMPI67TR gnm_880

GGGGCTGCTTTnTCGGGGTAGGSCCGGAACCAATTAGTTAGAGGGACAATAATGGAAA
 CGGTTTAGGGGGAGTAAAAATTGTGAAAGCAGGGGGAGCGGCTTAGTGAAAGAAAATTG
 15 AGTATTCGGGGGAAGAATTGCGCGGGTGGGGGATTAAACAATACATGCTTTGGCTGC
 TCGTCCAACTCGCGCTGGGGTGCAAAGGCACTTACTGCGGGGTTAAACACGAGAGGGG
 TAGCGAGCGATGATAGAGGTCCGATACTATTGGGAGGACCCAGAGAACCATTAGGGGGGGT
 GAAATGGTGGCATTGGGCGCTTCTGTTTTGGGAGGACTCTCAGGTACTGTGCGGTT
 20 CTATCTAAGAGTAAGAATCTCGGCTAGTCGGTTAAGTTAAGCGGGTCGTCAAGAACCG
 CGGTACCGGCGTCTGAAAGAGGAATTGGTCGTGGGTAACTCGTGGGGGAAAGTGTGAAT
 CGGAGGGGTTTCGGGGGGAAGTTGGGGTGCCGTATTGGAGAAATTATGGGCTACTACG
 GATAAATACTGGGAATTCTAGGAGGGGTGATTCTCGGGCGCTCAGGCTACTACGAGG
 25 CATAGTGTGTTTCGGATCTGCTAATGCGATTGCTTCTAAGCGGCTTAGACCTCCGAAG
 G

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 881>:

GNMPI68TR gnm_881

CGATCTATCTCCGAATCAAGTTCTCACCTCTATCTGCGTGGCTCCTGGTACATCCGTG
 30 AAGGCGCTCCGCTCAGGCGCTCATGGTGGCCATAGATCCCTCAATCCGCGCTTCACT
 ACCGAAAACCTCAGCATCCGGGGGTGGTCTCACGGGGGTACAGGTCTGTGTATAGTCTT
 CTCGTACGCACTTCTATTCCGGTCAGCCTCGTGGTTAGTAGCGTCAAAACTTTCTTTGCA
 GGCTCGGCCCTCTGGGGGCGCTCTCGGCGTTAGACTCACCGTCAGCGGTCTTAACACT
 35 AGCTCTCTCGGCCCGGTACGCTGCGTCAATCTCTTCTCTCAGTACCTTGTCAACCCGC
 TCCTCCGGGTAGCGCGGTGGGCTTCACTCTGTCTACAAGCTTAATACATTCCGAAATGGC
 TCTTCTGGGGTCTCTCTCTCCGACGCCAGGTCACTCCTCGTCTTTCGCTTGGGAAGT
 CTCTTCACTCTCGACTCCAGGGGTAGCGTTCCAGATCCTCGCAACTCCGACGTCCAGGTC
 GGCAGCGTCCCTCTACCAATGTAAGTTCGGCTCTCTACGTGCGGCGACAAAGCTGGC
 40 ACTGCGCTCCGCGCGGTTAGGTCC

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 882>:

GNMPI69TR gnm_882

AATACTCTCTCTGGCTAAAAGAGCCCAACTGGCAGCTTCGGCGCCAGATAGAGTAGG
 45 AAATCTCTGTACCTACATCTGGGCTCTCTAAGATCTTACTCCGGCTCCAGAAGCTGGG
 AAAATCCGTACAAACTGCGTTCGGGTGCGGGGGTCTTCTGCGAAATCTTATCTGGGT

-874-

CCTCGCGTCTCTATCTCCAGCACCCAGAATCCGACGCTCTTCGGCAGGGGGTGGGGT
 AGAAGGCGAATCAAGTAAACCCGGCTTGAGTTATAGCCTCAGAAACCCTCTTAAAGTAT
 AAAGAGAGACATAAATTAATCAGCTTCGCTCCAAAGCGTCAACTCAATATCCGTACAG
 CTTACTTAACTTTTCTAAATAATCCTAAAGGTACACAAACGAATCATTCAGGCATTAG
 5 CTTCTCTATAAAGGTCAGCGCTCAACTCAGAAAGGTTGCTCTCGTTGCGGCCAGATCTGC
 CGTCAGCGCGGTTCCTCTCGCTCCTCTAGGGCTACCTCCGACGACGGGGGGTCTTAAC
 TTACTCGCTCGTACTATGGTCGGCACTTCTGTTCAATAGGGAAGTCTTAATCTGGCAAT
 CAACAACTCGGCATCATCGGGCGAAATCTTCGAGTACTATTATCTTCTCGTAGGCT
 ACTAATAGGTAATA

10

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 883>:

GNMPI70TR gnm_883

CGCCTGGGATGGATTGGGTGACGTAGCAGGGAGTGTGGCCGGGGGTGCTTTTAAAGGA
 CTATAACGTTTGGTGGCGGCACAAATGGGCTTAAAGAGAGACTACAGCCGGCGGCTGC
 15 GGCGGGAGGAGCAGGCCCCAGAGAGAGTTGCCGGCAAAATAACGGGGCAGAGCTGAG
 CCAATGCGGCGCCTGACCAAAAAGGGAGCAAAAACACGAGTGCTAAACATGCTTAGCG
 CTACGTGGGGGGCGGCTTCGTTGGGGGCGCGTGCAGCTTCGTGCAACTACGTGTGCTATC
 ATTGGGCGCTCAAGAGGGCTGATATGGCTTAAGTTCGTAGSGGGGTGTATCTGGAGCTG
 20 CATTGAGATTTCCTTCAGCTTTCATTGTTTCTTAAATTTATCAAAACTTCGCGTGTCTG
 CTCGGGCAGCCTCGGGCTTCCGGCGCCTTTCCTCGCGGGTTTATCAGGGCGCCAAGTT
 GCATCAATTGCTTCGTG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 884>:

GNMPI71TR gnm_884

GGGGAATAGAGGGAGGGGTTCGGGAATACAAGAGAGTCAGGAGATCATCACTGGGCA
 GGCTTCCCGGGGTGAGGGGGGGCGCGAAGAAATTAAGGCTATCGCATGAGCGTGGGTG
 TCCGAAAGAGAGATCCACTAGCGGGGAACCTGGGTAGAATCGGTAGGAAGGTTGATCT
 GAGTACCGACTTAACCCCAACTGGGAAGGGTAAAAACGGGTTAAGGGCCAAATAGGAACA
 30 AAGTAAGAAGCCGATTCAAGTTAAGCATAATAGAGTGGCCGAGCGTTAGTCAGAACCAG
 AGGGGGGGTGAATTGTCAGGAAAGTAGGTGTTAATGTTAAGAGGTGGTAGTAGTTTATA
 TTTTCGTAGTAGATTAGGGCTTAAGAAAGCAAGGGTTCGTAGATTTTGTAAATAACGAA
 GAGGGTGGTCAACGGGGGGAATGTATATAGAGATATAGAAGAAGGAAGTGTAAAGATC
 AGGGACCGGGGAGTAAAGCATTCGGCTCGCCGGTGGGTCGGAAGCCGAGGTAGTCGA
 35 CGAACCGGTGCGCAAGAAGCGTGGGCTTTTCTAAGCAGACGAATAAGGGGTTTGGG
 GCTGGTTAACTGGCGATGTTGAGGGTAGTAAATGTAGACATAGAGCGTCCAGAAC

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 885>:

GNMPI72TR gnm_885

CGTGCCAGGTTTCTTGCTCTCCAAAGCATCCCGGGTAACAGGCTACGCGGCGTCCCAAGC
 40 ATCCCGGGTAACAGGCTCCGCGGCGTCCCAAGCATCAAGTTAGTTAGTACCAAAATGCTA
 TTATCGTAGGTTTATCCAAAGCCCAAGTGACAAGTTTCCCGGGTACGTAGGGTTTCAGAC
 AGGTTTCTTCTCGTCCCGCGTGACAGGTTTCTTGCTCTCCCAAGCATCCCGGGTACAGG
 CTCCGCGGCGTCCAATCTAATGCAATTCGTAGGTTTATCATACGCCCAAGTGACAAGTGT
 CCCCAGTACGTAGGGTTTCAGACAGGTTTCTTCTCGTACCCCGTGACAGGTTTCTTGCT
 45 CTCCCAAGCAGCCCGGTAAACAGGCTCCGAGGCTCCCAAGCATCAAGTTAGTTAGTACC
 AAATTGCTATTATCGTAGGTTTATCAACGCCCAAGTGACAAGTTTCCCGGGTACGTAG

GGTTCAGACAGGTTTCTCTCGTACCCACGTGCCAGGTTTCTTGCTCTCCCAAGC

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 886>:

GNMPI73TR gnm_886

5 GCTTAATATCTTCCAAGCTTATCAATAAATTTCTTCTCGTCTTATTACGCTTGTCTT
AAGTCCCTTCCTAATTTCTTAAGATGTAGTGCTTTCTGGGCTTTCAGAGGCAGTAGCCT
CGCCGAAAGTTTTAAATTCGCTCAATACTTTCAGAAATCCTCCTCGCTCTCTCAGCCA
CCTAATCTCCGTAGTTTCGAAGTAAATTCCTCTAGAAGTGCTCTTAGATGCAGCTCCAG
10 GGCAGCATTAAAGATGTCCGTAATCCTAAACTTGCTCTTACGGTCCACTGTGTCGGGTCT
CTCCGACGGCTCCGAACATGCTAAGCTTGTGGCTCTTACGGGCCATAAACCTCTAGTCAT
CCTCTCTATGGGGGTCATTCTCGTCGGTACTCATAAACGAGTCTCTAGAGCTTCGGGCAT
CCTCCTAGTTTGGGCTCTCTTCAGATACTGGCAGCTACTCTAACATAATTAATATTA
TCGGATCAGATGTAGTAATACTAGTAATAATAATATATTAAGTACCATCCCAAGCTTTCA
15 GGTAAATATGAAGGGTAAAGGTAGAAGCAGGTTAATATGCAAAAATTAAGTAAATAGTT
AAGTCTTCTAAATCTGCTCCTAATCTCTTG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 887>:

GNMPI74TR gnm_887

GAGGGCATGTCATTCTTAGTGTTAGCGGGGTAGGTGGCCACTGGTTGCGGTGGGGACC
20 TCCATAACCAAGGAGCAATTTAAATTTTGGTTCGGGTTCTGCAGGATTTGGCATCAACGA
ACGAGCTTAAGTCCTAATCCGTACAGGCACCTGGGCACCTCCGGGGCCGGGCATAATCCG
GGCTCCATCCGGGCCCCGTCTTCTGGGTCCAGAATACTTGCTGGTTCTGGGTAAAGT
GGTTCTGGGAAGTTAGGGCTTCGTTCAAGAAAATCCAGCCAGCTCCGGCCAAAGTACCA
25 GGCCTGCGGCTTCAGCTTCGTGCAAACTCCAGAGTCTGGTACATCCTAGGGGCAGGCTT
CCCCGGGCTGAGGGGGGGCGCGAAGAAGTAAAGTCTATCGGCATGAGCGTGGGTGTCGGA
AAAAGAGAAATCCACTAGTCGGCGCAAGTGGGTAGAATCCGTAGCAAGGTTTATATGAGTA
CCTAATTAACCCCAACTGGGAAGGGTAAAAACGGGTAAAGGGCAATTAGGGA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 888>:

GNMPI76TR gnm_888

GGCTACCTCCTCGGCACCTTCATCCTCATCCGGGGCTTCGGCGTGGGCTCCTCTACCCG
TCCCGGCTTCGGCAGGCTCTTGATATTAACACAGAACCCGCTCCTCCCTAAACTCGTT
TGCTAGGTTACAGTTCTTAAACTTCGGGTCCTCCCTGCTCTTCCGCACCACGGCCATCAT
CCATCTCCGATCTTCATTGCTTGGTCTGCTCTCTCTTTGCTAGAAAACCTGGTCAGCTT
35 CTCTCGGTCCTACTGTGGTCTTCGAAACGCTGGGTACATTGGGCAGAATTAGTACCGGA
TCTCTTTCTCATCCGTCCCTACCAAGCGTTCTATACCTCTATCCTAGTCCTCGACTCCGA
ACGCACAGCTTCGGGGTCTTCTCTTCCACAGGTCCTTAAGCTCGTGGCCATCCGAAG
CCGTCCCTGGCGGCAACAGCAGCCCAAGCGGTGGCGGTAGAGCCGGCGGTGGGT
CCCTCCTCTCTTCGGTACATCCTAGTTTCGTAGGGGGCGCGGGGAAAAACACAGACCA
40 AATCAGCTTCTCTAAAGGTGATGATGAT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 889>:

GNMPI77TR gnm_889

ATAAAAAGTAGCTACAGGGGCTAAACGCCTTCGAGGCAGCCCTCCGGGGTTACTCAATCA
 CAAAGTGTCTGCCATCTCCTATTCTTAGGGGCAAGCTGGGAAAACTAAACCTAGACAT
 CTAGATCTTGGTCACTTGAAACAAATTTAGGCGTGCAAGGCAACCTATAACCGGGGTAC
 5 ATCCTAGGTAATAGTTGGTATCCGATGGATCCTCAACATCCCCCTCGGTACCCGCTAGGC
 CAATGGGGCCTAGGTTGAGATTCTACTCCGCGTCTTCTAGTTCCTTAGTCTAGGCAT
 AAAGATTCTGCTAAATGCAGGGCCTACTAGGCCAGGCTTTCGGTTTCACGGTCTTCGT
 TGCTATCATCATATGCAGGGTCAGCTTCGTCAACAAAAAGCCCTTGCCTCAGCGGGCGCA
 AATTCCTCCTTCAACCTACTACTCGACCTCGCCGAAAAACGTAAACCAAAACCTTCGTGCA
 10 AAACCTCGGGATCAACAGGGCAAATATTGGTACCCCTCAAAGTAGGCTTCAATCGGGGAGTC
 CTCCTCCTCAAGAGGTTGCTTTTCGTTGCAATCTAAACCTGCTTTCCTAG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 890>:

GNMPI78TR gnm_890

15 GTTCTTCTAATGGTCCGAGCTTTTCGTTGCAACGTATTCTAAACTTTGCTCTTGACGA
 ACGATCTACAAAAAGGTCCTGSCCTTTCGAAGCATTGGGAGTCAGATCTTCCCTCTCGAG
 TTTCTCTAGTCCCTCCAAACAATCTCCCTACGTCCAACCTAGTCTCAAAAATTGGGATCAA
 TGCATCTCTTGCTCTCGGTTGGGGGGCGGATTGCTAGTCTCAACCTCCGGTAACCTCGG
 20 CTCGGCCTCCGCTTTGACCTCAGGATCGTAAGAGCTGCTAAGATGTCATTAGAGTGGCG
 AGTGTTTTTCAACCTGCTCTCGTGAGGGGCGCCAAAATTTCTCAAAACCTCTCCAGCTC
 CTGTAACCTGGGCCCTAGGATGCTGCATTCTTGCTAAAACCTGCCATGGCCGTGAGATTCTG
 AGTAAACAATTAGGCCCTCCTCTCTAGTCCAGGGTCCCTAAATTAGCAAAAATCGAAAA
 CTTCCGGGCCAAAAATAATGCTATCAACTCTAAACTAGTTTCTGGCTCAGGGCTGGGGC
 TCTTCGGGCATTCTAGGAGCCTGGATCTAAAGGGTCCATAAGAA

25

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 891>:

GNMPI80TR gnm_891

AGCGAAACCGATGGACCAAGGCAGAAAAATAAAGACGGGGCGGTTGAGTTGCAACTAAG
 30 CTGGTTGAACCAGGGAAGAGTTCTAAACGGAGGGAAGGACTGTAAGTTATGTAGCT
 TAGGAATGATCAGCAATAAGAGGTTGGGCGCGGGGCAAGAGCTACAAACTAAGAG
 AGTACACGAAGGCATAGGGAAGGGCAAGAGATGCTAGGTTAAATTAGGATTTGGGGCT
 GACAAATTAACACGCCCTGCTTGCGGGGCGAGGGGTACAGCAAGTACCGAAGTTGAAAG
 GAGACGACGGAAGGGACAGAAGATAGAAGAGGATCACATGGGGCAAAAGGGGCAGATGGC
 35 CTGAAAAACAATGCAAAAGCAGCGGCGGACTAATTCGACCGTCCAGGTGTCAAGTTTCA
 AAGGGGTAATACTCCTAGGTTCCAAATCAGACATCTCGTAAAGAGGGGGCGTCAGATAA
 AGAGTTCATTGATAGTGCTCTACTAAATGGG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 892>:

GNMPI82TR gnm_892

40 CGCGGGGGTAGAGGGGGTTGGAGTGCATCCAGGTCCCGGGCGGGGCCACCCCTCTCCTG
 GTTCTGGTTCCTCCTCTCTCCAGCGCTTGAGAGCGCTCCGGTCTCTGGTCCCTCCAGA
 GCAACTATCTTTGACCAGGGCGTAGGAAGGGGGCTTGGCCGTGCTCTGGTGGTTAAGTAT
 CAAACTATTTCTTAACCTAAATATGCGCTTCTTCCTAACCCACCTCCTCCGGGCTCCCGCA
 45 CTTCTGTATAGATCACCAACATCCTTAAAACTACGAGTACGAGCTCGACAGCTCTCGA
 TACGGCTTTCCTTTCGCGCAACCGGGCGGTGGCTTCGAGCCGGGTGCTTCCATCCTGGC

GGTGGGGTCTTAGGCTTAGAAGCTCCGTGCTTTTCGGCTGCAAAAA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 893>:

GNMPI83TR gnm_893

- 5 AACTGATGCCGAGAGACAGACAGTTACGATGCAGGAGAGGCGTGTACAAATGAAAAAG
GTACATAGGGAGAGGAAGAACACCGGGGACTAACACGCTTCGTAAAAAGAGACCTCTAG
TAGTCAAGGTCTCAACATAAATCTGATCAGCAATCGGGTAACCAAGGCAAAAAACAAGT
TAGACCTGAGTGCAATTCCTAGTTTCCGGGCCCGCTTCATGATTGCAACCTCCTAAGTAA
CTCGCTCCGTACAAAAATTAATAGTACTATCTTGAAAAATTCAGGTATAAATTCGCTTTG
10 GGTAAAAATAGGGCTAGGGAAAACTTCGGAGAGCTTCGTGCARTAGTCTTTCATTATA
GGAGATCGCAAGCGTCTACAGCGGGGTGGGGCGAAATGGAGAGGAAAAAGTTATGGATT
CAGGTATCTTAGCTTCnTTAGTTTGGCTTTTAGTGCTATTAGTTCACATATATGCGTCTAGC
CC

- 15 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 894>:

GNMPI84TR gnm_894

- ATCATTCTCAGATCCTCATCCTCGCTCCTGTCAACGCTTTCATATTGCGTTTCTTGATAG
TTCTCATGGGTGCTGTCTCTAAGGTAATGCATTCTTCTCAATGTGAGTACCGTAAACG
20 TTTCCGTAATTGTGCTCTTTGTAATCTTCGTTTTCATTGACGTAATCTTTTCCAGGGCAA
AGGGTTTATATATATCTTCCCTACATGCAAACTTGGCCCTAAAAATTCGTGTAGAGGTCA
GGGCGCCTCTTAAGTCTTTAGTTGCTGCTATTATTTGATTAAGTCGTCATTTTCGSCG
TCAAAGCAGCTCTCAACTTCTTCTTCATTTTCTTCGCTGGCTTCGTAAGAGCATCAGGGA
TTCTATTCCATATCTCGGTTCAATGTCGTTCTCTTTCAGCAACCTCCTATGTCTTCTCAA
ATAACGAATTCGTCGTGCTCAATGCAGCCTTCGCGGGCATCAACTTAATAATCGTAATGC
25 CCTCACTACTGTCAACACCTCCCTCTCTATCGTCGCGATCCTCGCGGTCTCGATAAACG
TTATCTTAAAGCCTA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 895>:

GNMPI85TR gnm_895

- 30 CGCTGGGTCATGAGTGCTTGCAGCTGCGTCTGCGCGGTAGCAACAAGTGGTTCGCTTC
GCTTCTCTGGGCACTACAGTCCGTACTTTGGGGTCTTAATTGCCGAGGCCTTAGCGGTG
GGCAGGGGCATCCGACGCCACGGCCGCGCTGTGCTTTCGCGAGGGCCGCTAGTATTGCT
CGAGACCCCTCATTAACTAGTACTATCGTCCAAGCTTCAAACTCGGGTCTGCGGGGGT
AGTATCTTCAGCATCCGTAACCCCTCGGGGTGCAATAAAGCCGGGGATTAAATCCAGTT
35 CACGTTCTAAACACGGGCGTGGGCATAGGGGCGCTCAGCATCATCATTGCTCTCGCGGTG
GGTATAGTCGGGGTCGTAATAACTTCTTTCGGGGTACTGGTACGTTCTCTATCGTCAAA
GAGGCGGTCTTTATCTTTCGAAACTACCTCCGTACCGTCCGCGGTCCGAACGTACTCGC
TTCATCTGTCAACGTAGCCCTCGCTCCAACT

- 40 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 896>:

GNMPI86TR gnm_896

TCCGTAAGTTAACTCATAGGTGGACATTTCGCGCGAAAGTACCCCGAGGGGGCTCGCC
AAAGTCGTAATCTGGCCAGCAACCTGGCATTAAAGTAAAGATTACAGAAATAAATGTCTA

-878-

5 GGAATTATAGGGGAAAAAAGTAACGGGGGCCAACGATGCTTATCGAGCGACCGACTGGGC
 ATTCAGAGGGCTAGAAAAATGTTGGGCTGCCGCAACCAAGGAGGGGCTTAAGGGGAAAA
 GAGGGTGCCATTATAAGACGATAAGCATAAACATAAGTAGCTTAAGCAGGAAAGTACCAG
 ACTGACAAGCACCTAAGAATCGTAAGCTGTTTCTCTGAGTATATTAGAGGCAGCAGAA
 10 CGCTAGGCCAGCGAAAAAGTAGCTGCCGCGGAGAGCCAGGGTGGGAGGGGCGAGGGGCT
 GTACGACAGAGAACTATACTTACGGGCTAAGTAAGCTTAAAAAGCTTCGCTTAAGTAGTA
 CGCGAAGAGGCCCTACTGCTGTACTATTACAGAAATCTGGAAGTATGGTGAGTATTTAA
 15 AAAATCTTAAGAGGAGTGCTCGGAGTTTCTTAAAAAGCTTATATCGGGGGAGATCTTA
 CTGTAAGATTAGCCCTGCAGACTCTTAAGAGAGACATAAAGCTGCGTTCnTACTAGAGTGA
 CATGAG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 897>:

GNMPI87TR gnm_897

15 GTATAGCTTCAGCGTCCTGGGTGCGGGCCGGGCGGAAGTTCGGGGTGAATGGGCCTAGA
 AGTCGGTACGGGCATCCTCTAACCGGCCCTCAACCACTCAACTTCCAGTGGATCTT
 CGGGGGTGGTACCAGCTCCGGGTAATTGCGGGTTCAGCTTTCAGAGGGCAGCGGTAA
 GGTGTAACCGGCTCTTGGGAGCTTCGGGTTCTATTCAAATTCCTCCCGCTAACTTTGT
 CCTCTAGTTGCTTCCAATCCAAGTTTTCGCTGCTCAGGCATCCGGTAAATTTCTCTTT
 20 CGGGTAAAGATTCTTCAGCGCCATCCATACCAGCTCTTGCAATCAAAACATCTTCAGTT
 CGGGTTAGGAGTCTTCGCCCTCATAGGAGCTGTCTACTAAGGAGTTCGTCAGGATTGCT
 TTTAGATTAAGAGGTGCAAAAATCGTCAAGTGCTTGGCTAACATCTCCATAGGATTGCT
 CCTAATGTCAACCTATCTCGGGGCATCAACCTCCGATCTTCAAAAAGCGCTAAATTTT
 AAAAGAGCTGAGCTAGGTTCAATCTTTGGTCTAGATCCCTAAGATTGGCTTCATCTCCCA
 GGTGATGATTGCTAGTCTTAAATAATTACT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 898>:

GNMPI88TR gnm_898

30 CGTAAGAAAAAATACTCGTACTCTGGCAGGGGCCCTGCGCTCTCTCGGTGCTTAAAC
 TCTTCGGTTACTGGCAAAGCGGTCCTAATTTCTTCTGCTAGTAGTCTAGTTGCTATTGG
 GCGCTCAAGACCAAGAAACCGGCACATCCTATTCTCGGGTAATGTTAACTTCGGCTGGA
 TATTATTATCCGGGAGGTAAGGGCGCTCAGGGGTAAGTTCAAAGACTTCCAGCCAGGGC
 TCTTAAAGTGGTCTTGGGGCTTACGGGCAATCGTCTGGGGCGGTTGGGGTCGGGAAGGT
 AAAGGGTCTGGTGGGCTTCGTTTCATCATATTACGGGGATTCTTCTAGTTAGCTTCTTTGC
 35 TAGGGTGGTTGCAATATCTCTATCTTGGGCATTACTTTCTCGGAARTCTCGTGATGCT
 TCGTAAATCCGAACTAACGGCGAAGAGGTAGTCGGAAGCGGCTATTCTGATCTAAAAG
 AGAGGCTCCGGGGAACCTCGGCGAGAGGCTTTATCGGGTCTCTGAGTGTCCCGTCCCA
 GGGAGCTCCnGTCTTATAAGTAGAAATCCCTCTATCCTACTTAAGCTAGTAATCCCAGG
 CGTAAATAAGTTGGTAAGCTGG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 899>:

GNMPI89TR gnm_899

45 GACAGACAGGCTCTTAAATCCAAAGTCTCCCTAGTCATCCCTACTTTCAGGCTTAAAGGC
 CTGGTAATTCGAGTTAGATTGSCGTGGCTACAGCAGACCTTCCAGGGGCGGAAGTACT
 TTCAGCTTCCCGTTGGTTGCATCTACAGACATCAGCAGCTTCTCTTTTGTGCGTGCGATT
 CTTTGTAGCCTTCTGGTAACGGCACCGTTTCTACGCTAGGGGTGTCAAAATCTCTAGTC
 ATTCGTACCTAGTCCAGCCAGCTCTCGTACAATCCAGGCTTCGTGCAAAAAGGATTCT

ATCCGTACTCTCATCGCGGTTGCTTTGGGGCTTGGTAAACATCGTAGTCGAAAGATC
 TTTTAGGTCCGTCCTACCTCCTACCAGCTTATAGCCGGTAATAGGGTACATAGGGTATG
 TTTAGTGGGGTTCCTACATAGATTAACTACTCGGGTAAACCGGGCCATAAAC

- 5 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 900>:

GNMPI90TR gnm_900

- 10 CCTTGTGTCCCAACCTGCATTCTCGGCTACTGGCTACAATAACCGGAGTACAGGCTATGG
 GGTGAGAAACCTGCTTCTTCCCTCAATATCTTCTTTGAGCGGCTTCTTCTTAGCTGT
 CTCTTGTCTCTCCAACCTCGTCAACTTATCTTTCAACGCCGTACCTGCCCTACCTACACT
 AGTTTCTGGGCTCTCCTAGTTCAGCTTCGTGCAATATCTATATCAGCAGCTACCAAAAT
 CCTACTTGCAGGCGCGCTATCCTACCATAACTTAGGAGTTACTCACGGTCGTTCTTAG
 TGTAAATCTCTCTCGACTCCAGCATCAAAGTCGTTCCGGCTCTCTTCATCATAGTCTT
 CAATCTCAATTTCTAATGCTCCATCGGGGTACATCCTAGTGATTGCTTCATTCAACCT
 15 TACTGTATCCCTCCTAAAGAGGCGTGCTATGGCTTCATCTGGGCCATCAATGCAATCGT
 TTTGCTTAGGCCAATATCAAGCTCGTTTCAACCTTGTCAACTTTAAGATCATGCGCTGC
 AGTCATGCTTCTCCTGATCCTCTAAAAAATTCGCCAATTAAAGTTTTCTACTATATTA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 901>:

GNMPI91TR gnm_901

- 20 TTCCCTGGGCCCGGCTGCTCGGGGTTTTGCTTTTGTGGTTCCTAGTAGGCTTCATAAA
 GTTCTTTTGAAAAATTAACTTCGGAGTGATACATACTAAATCCGGGCTTCTAACGT
 AAGAGGTAATGTTGCTAGTTTAACTCGGGTGCAGGAATTCAGTAACACGGCTCAGCGG
 CAGCAAAAACCTCGAAGATGAAATAATCTCTCTACTAAGATCTAAATCTAATGTCGCCCA
 GCCAGGTAACCTAAGTTTTAGTGCTATCTCCTCAACTCTCCGAAAGGCGCAATTACAGG
 25 CATACTACGAAGTTGGTTCGGCGGCAATCCGGAGAGTCAACGTCCTCCTAAATCTCTCAA
 CGAGCTCGGCTTAAGTTGCTCCCTAGTTCGGCAAGCCTCCTCCAGGCAGGAAGCTTCTG
 GTCCGGATCTGCATGGTCCCTCGGTTGCGGGGCAAGAATCCTAAGTGCATCCCTGGGCAG
 CGGGTGGTCCCGAAACGTGCGAGGCCCTTAAACCGGGCCAGATTGTGCAGCTTCAGGAT
 ATTTGAGTTGGAGCTGCTGCTGCTCAAAAGTAAGCTCCCTCGGGCCCCGAAACAGCGTAAC
 30 CGCCGGTCCCGAACAATAAAGGCCAGGGGC

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 902>:

GNMPI92TR gnm_902

- 35 TTACTGGTGCATCATCTGGCTACAGCGGCTACTATACCCCTACACGCTCTCCCTAG
 CGTAATCCCTCCAACTCCGATTGGTTAGAGCTATAAACCTAAACCTAGCCGCTCTCAACG
 CGGTTCTATATCTAAGAGCTCTCAGGGCATTCCTAATCTTCTAGTCTTATGCTTCGGA
 GTTGATGCTCCCTAATCTACCTACTACTCTCCACCTCTACTTTGGGTGATCGTACTGTCTT
 CGGTCTTAGTTCGGGGCTCTATAATCCTAATTGTATTAAATATGCTTCAATGGAGCAAAA
 TCGCGGAATAAATATTGCTCTTATCGTAATATTACTGTTCAAGTTCACGTCGGCTGTAA
 40 TCGAGGTCTCTATCAAGGATCTTCTCAACGTGTGAAAAATCTTCATTTCATTCCTGTAA
 GCTTCATAAGAGGGTAATCTTCGGCTTT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 903>:

GNMPI93TR gnm_903

GCAAAACCTTCGCTTCAGAACTTAACGCGCGGGGGCTCGGGCTCTGTCGTGGCCCTCCAG
 CCGGCACCTAAGCATTTCGGGTAAATAGTCAAAGCTTCAACGTACTCGCCTCAAATCAT
 TACTACTAGAAAGATTCTAAATAAAATTCGATTCAATCCTAGTGGTAGAAATATGCTCCC
 5 TAAGATCAGAAAAAGTAAGTTTCCTTTTTCGCTGTCGCGTAAAAATCAACCTCAATATTC
 TCCAAAAAGTATTACCTTCCTAATCTCAAAATTAACACCGTAGTTATAGAACTCGAGC
 CTTCCAATCCAATAGAGTTGCAGTGGGGTTTAAAGAGCAACTCGACCAGAGTAGCCTCCA
 AATCTTCAGCTGTAACCTAAAAAATCTTGCGTTGAAACTTCGAAGTAGTCGAGTCTGGG
 10 AAACGATCATTAAAGTCCGGGCACTACCAACATATCTTTGTAGGCTATTTCTCACTG
 TACTCAATCCAGGCTTACTCTAAGAAACACAGAAATACTTTTCTAGTACAGAATCCGG
 GCTTGGGGTAAGCTTCGTGCAAGCTTCTT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 904>:

GNMPI95TR gnm_904

TTGGGAATCGCTTGGTCAATATCCGGGTCTTCGTCTCTAATACTAAGATTCTTGGCTCG
 CCGCTCCGGGCTTCTGTCAGAGTTCTTATAAACCTCTAAAGTTCTGTTCTCTAGAGCG
 15 TACTAATATTCTCGTTACGGTTATTAATACTCGGTTACTACTCTCCTCTAGCTCTAGG
 CTTTTCCTTCAGCTTCGTGCAAACTCTCAGGCTATCCAATCCTAGGGGTGATGGTTGG
 CCTACCATAAAAAGCAGCTTCAGATTCTTAATCTTAATTCGGGGCTCTCTTCCTTGCA
 20 TCGGGTAGTACAAGCTCTTTAAGGGCGTCTCGTTCTAATAAAGTAGCGCCCTATAGG
 AAGTGCTATAGTTAAATGAAATCTCATAACCTCTCTTCATATCTTATGCTTCTAATACC
 TCATACTCAATTTAATGTAGATGCTCTTCCGTAATAATTTACTTAAATGCAATAGTAC
 ATATGTCTTTAAATCCGCTCATTATGTTCTTTTGCTCTTTTTGCTTTGGATGGGCTAC
 25 CGCCGCTATCTAGAGCCGGGGCGCTTTGGCGTTCCTCTAAGTTCTCTTAAGTTACGAG
 TGTCTCGCTGCCATCTCTATGTCGTGGTAAGCTTCGTGCA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 905>:

GNMPI96TR gnm_905

CTCGCCGGTCTCTTAAATCACAGAGCTCTCTACCCCTCTAGACCTCCCGGCAGCTACGC
 30 CCCCTACAGCTTCGCGCGCGTGGTCTGCTGCTGCGTCAGCGCCGACCTCGCGCCCTGCA
 CTCAGGGCTGCTAGCATCTCGGCTCTTAAGCTTGCTCTTGCAATAATCGTCAAGGCA
 GGGGGTCACCAAGGTCGGTAATACCTCCAGGGCTCTTATTCTGAAAGGTTCTATGCGCGG
 CACAGCAGCTCCGCGAGAAGTGGTCGGCGGCAGGGGACCTAAGAAAGTCCGGGGTACCG
 35 TAGCAGGGGAGCGTCCCCCTCCAAGGCTGCAACTCGCAAGGAGACTCCAGAGGCTCCTCC
 TCGCGCTAAACTGCGCAGGCCCGAGTCGTGTGTAAGTGGGAGACGCCAG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 906>:

GNMPJ16TF gnm_906

GTTGTCAGTGGGGGGGGGGGGCTTCCACATCCAGCGCGTCTTTCAAATCGCAGCGGT
 40 ATCGTGGTATTCAAACCTTTCAGGTCAAACAGTTGCCCAATACGCGCAACACTTTCCA
 CAGCGGACGGAATCGCGAAGCCTGTACCACGCCGTGGAGGATTGCAGACGGCCTTC
 CATATTGATGAAGCTGCCTGAGGTTTCGGTAAACCGTGCAACCCGACGCAAAACGTCGA
 AAACGTCAGCACGCGTTTCGTGAAAAACGCGCTAAACGCAATCAGCCTTTTGGCGGTT
 TCAACGGG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 907>:

GNMPJ71TR gum_907

5 GACGAATCGGTGTGGACTGAGATGGCAAAGATCGTGTGACCCCTAAAGGTCGCTTAGT
GGCCCGGGCCCTAGCCTACTAACGATACGGTGGTGCGGTGTAGCTTGTCCGTCTCTAACT
ACTAGTGGCTGGGTCCGGTCCGGTGTGTGTAGTACCCTCGTATGGCCATGTTTACCCTGGG
TTGGTGGCGTAATATAAATAGTTGATGGTGACCCCTCGTTATAGGGACGTTGCCGCTGTCT
AACATTGTGTTGCTAACGTTGACCCCTGTTGAATCTGCCGATGACGACGATTACCCCTGT
10 CTCGGGCTCCCCCGTGTACTAGGTCCCGGAGTGTGGCGGCCCGCTTCGCCGTTAGAAAA
TTCGAACTAGGCGGATCCCGGCCACCCCTACCCCTACGCGACGCTTATCCCAAAACCC
GAAGACAGGGCGCCCCAACGACCAACAACGCGCAAAAGCGACGCTAGTCGCCACTACG
CTCCTACTAACCGATAACCGGCTTAGTAAACCTGACACACTGGTCGATCTGTTGG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 908>:

GNMPJ73TR gum_908

15 GCGTGTGCGAAACGGTGTAGGACCCGGCCGACCACGTTGACGAAATGGCGTTGATTCGTC
GGCGCCGGGCATGTATGGATGATTGGGTGACGCTATTCCTCCACGGGTAGCCCGCTTGA
AATGCGAACGTGTAAAGTTATTCGTTGCTCCCGACCACTTGTCACTACAAGTTGAAGAG
TGCGAGAAACCCCTAGCCCGAAGGTTCCAAACGGGACCCCTACACCCAAAGTCCGCCAA
20 CCCACTCCGCCCCCAATGGGAGGTAGCAAGTTCGACCATACTTGTACTCTGTGTGTTGCT
GATAGTTGCGTGTGACATAAACTATTTCTACCCCTCGTGTACATGGATGGCTCGCT
TCCACCGAACGTGGTAAACATTAAAGCGACCCGATTTGCTTACAGACGAAAAATGCGCTG
TTGCCCTCGTGTGGCAAAATTAAGGTCGGGCAATGGTGGAACTGGGACGTCGTTGCT
25 CTAATGATCTCTTGGACGCTTGTGGAAGTCTGTTGGGTAAATAGCTTGGGTGATATATA
GAAACTTAATGCCGACGTGGGTGCTTTCGTTGTGGTCTGCGGA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 909>:

GNMPJ75TR gum_909

30 CCTGGGTAAAGTAAACCCCTGGTAAAGTAAAAATTTGAACAACTGGGGGCCCTCGA
ACGGGCGCCCGGTAGCGATTTCATCCGTGACGGAAGAATTATACACTGCTGTGCGAG
CTGCCCTATGGCTTCGCTTGGGACGGGAAGGTGCGGGATTAACTGTGCACGGTTGTTAAA
TCCAAATCGCCATAAACTGCGCAAGTTCCAACTAACACACCTGGCAACGATCGAACTAGC
TAGCAAGTCCCCACTCTCCGAAGCCTCTAAACGACAGAGCTAAGTTCTATGAGTAACCA
GCACGGGCCAGTCCTATGTGCCATTGTGTCCTATATTTTATTCACATAATGCTTCGGGCT
35 TGAATGATCTCCCAAGCTGGCCAAATGTAAGGGAAGCTCTACTCCTAGGTGAGCCCTGT
GTCAGACGTCCTCA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 910>:

GNMPJ76TR gum_910

40 TTGCGCTAGGACGCTCGTTTCGACATAGTTATGTTAAAAACGTGGTTGTTGTTATTGCG
CGTGATBAATGGTGATGACCCGTTGTGCAGCTGCCTAAACGTTGCTCGAAGTTTCGTGTC
TTACCTTTTCACGTCGCCGATTGGTTGATGTCCTGGTACTCGTATGATGGGACAACTGCAC
TGTTTAAATGGCTCACTTATACGACTTCTCTTGGTACTGTGCACTAGTTAAAGTGCTAA

ACTCCTGAGCCTAAAATTTCGTACATTGTTTGTTCACCCCTAGTAGGCTTTGGAGGGCAA
 AGGTGACGAGTAGTGAAGTGGGCATGCTAACACGGTGTAGATGGCTAGGTAGGTA
 CACCTATTATTGTTGCTAGTTCCCTTAATTTAAATACCCGGATGTAAGTGTAGGTAGG
 GTAGGTAACTAGTAGTTATATTAAATGTTTACACTGGGCCGCTCCGGCTGGTGTAAAGT
 5 AGTTCGGTACTGTGATAATACAAACACTGTTTATATTAAATACGGGTAGGACAAATGTAG
 TGATGATTTACGTTGTGTACCTTCGCCCCCTTGCTTATACCTTAACCTACACCCATT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 911>:

GNMPJ77TR gnm_911

10 TAGGCGTGGCTCCTCGTGGTGGGTCGGCAAATAAGGCCGAGTTGTTTGCTGCCCCGGCT
 GCACCTCCCTCCGTTAAATTAATTGCGCAGGTAAACCTCCCCCGCTCACTTAAGTCGCGG
 CCACCCATTGGCCGAGTAACACTCCACCGTTTCGCAACGGCAATGGCGGACCTCCCGCTC
 CGACCGCGGCCGATTACTACTGCTTCTCTACTGGCACCCGAAACATGCGGGAATTAAGT
 TAACGTTTGCCCAAA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 912>:

GNMPJ79TR gnm_912

20 TTTCAGAACGGGTGCTATTATACCGTGCCAGGTTTCTTGCTCTCCCAAGCATCAGGTCC
 CGAGGGTGCAATCCGGTCCCTAGGTTTATACCCGCGAGGGTAACCGCGGCGAGACCCCG
 CCACCCACGGTCGAAAACCCGAGAGACCCGCGCAACAAAGTCGCCAATTCTCTAG
 CGGAAGCATCCCTAAAGTGGCTCCGGTCTTTAGGGTACGCTGGGTTTCAGGGTCATCAT
 GGTCTGTGGTCTCTTCGCGAGTAGTACTCGGGGCTAATCGGCCAATCCTCCATCCGCT
 TCCATCCGTCGAGACGCTACATGCTTCTCTCAGCACTACTAAGAAAGTCCCGCGCTC
 TCTGGCGCTCCTAAAGCGCCTCATAGAATTCTTCAACACAACTCCAGAACCTAAAGT
 25 CCCCCTGGTCCCGCGGCCCTCTCCCTAGAAGTCAGCATCTACCTACGTGGTCCGGT
 CTCTCTGTTGGAAGTACGCGCTTGTCTGCTT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 913>:

GNMPJ80TR gnm_913

30 CGTCGTCAAACTCCTGGTTGGCCGCCGAAATTTAGGGTAAGTCTCCGGGCCCTAACTG
 CCGCCGCTACTGTCTTATGTCTCTAGTTCTACCGCTCATACCAAGAGGCCCTCCCAT
 ATGCTATTACTGCTGGCGGCATAACTTGGGAGTCTCGGTCTCTGCCAACTGCGTTTAA
 GCGGTACAGACCTAACCAAAGTCCATGCTGGCGTCCGAAAAATCTGTGCTCTTGGCCTG
 35 AACTAGTCTCTGTGTAATCTTCTGTCTCTCCCGTGGAAGTCATCTCTCCATCTAA
 GTATTAAAGAGGGTTCCTAGCTACGTCTCGGGTGGTCTTCTTACTAAAAGCTCTCTCAGG
 GTCCCGTCAGCCCGACCTCTCTGAGTGGGTCTTACGGGCGTAACCTCCGAATCTCGCG
 GCGGATTCAGAGCATTTCAATGCGGGGTACCTTCGTGCAATAGGCCTTCAG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 914>:

GNMPL04TF gnm_914

40 TGAGATAATTCGCCCTTGGATAGCATGGAACATGACCGAAGAGCTGCAACACTGCTT
 TGAAGCACTTTTACACGCTCGGCCGCTGTTTACCGACATCGCACCCCGCTACGACCA
 CATCACTCGGCGATAGGCGCGGCAATATCGGCTGGTACGGCACGGCGATGCTTTGTTA

-883-

CGTTACCCCGAAAGACATTGGGGCTGCCGACAAAGAAGACGTGCGCACCGGCATCAT
 CACCTACAACTCGCCGCCACGCCCGCATCTCGCCAAAGGCTGGCCGGGCGCACAAAT
 ACGTGACACAGCCCTGAGCAAGCGCGTTTCGAGTTCGCTGGCGGACCAATTTCCGCT
 AAGCCTCGACCCCTGAACGTGCCGAGAGCTTCACGACGATACTCTGCTTGGCCGAAGGCG
 5 CGAAATCGCCCACTTCTGCTCGATGTGCGGCCCAATTTCTGCTCGATGAAATCACGC
 AGGAAGTGGCGACTACGCCGCAAGCAT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 915>:

GNMPL55TF gnm_915

10 TCCTACCTTTTCTATATGCTCCAGTGCAAAAGTAAAAATACCCTTGGGATATGGAGAG
 GGTTTAAACTTTGTATTGGGTTGGCAGCAGACCATCAAAACCTGCCCGTCATCGCCAAA
 ATCGCCGAAGATTGCGGCATCGCCGCCCTTGCCGTCCACGGACGCACGCTACGCAAAATG
 TACAAAGGCGAAGCGGTTACGAACTCATCGCCGAACCAATGCCGTCTGAACATCCCG
 GTCTGGGTCAACGGCGACATTACTTCGCCGCAAAAGGCCAAGCCGCTCTCAAAACAAAC
 15 GCCCGGACGGCATTATGATAGGCGCGGCGCGCAAGGCAAGCCGTTGTTCTCCGCGAT
 TTGAAACATTATGCCGAACACGGTGTTCGCGCTGCTTGAAGTTTGCGAGATGCGCC
 GCGCTATTTTGAACACATCCGCGCCATACAC

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 916>:

20 GNMPL69TRD gnm_916

AAGTTGGCAACGTCGTTTGTCTGTAAGTCCGACCGCTTGTCTGCTGGCGAGGGT
 GGCAATGGCTAACCTTGTAACCTGAACGCCCGCTCCGCTGCGAAACGTTGCTAGGCA
 AGGCGTAACAAAAATGGTGGATAATAGTAGATAGTCCACGGTGGTAAATTACATTAGTG
 25 ACAACACAGCGGACCAACCCAAATTAGCATAGTCCGCTTCTGTTCCAGTCTAAAGAGAA
 TGACCTCTCAAGGCGTCGAGTATTAGCGAACTGGCCTTGCAATCACCGCATCGCTCCG
 GGTCTCTGCTTTCGCTTCGACCCAAACCAACTTATCACCCCTATGTCCATTTCCTCGC
 CCTCTAAACGTTGCTGAAACAAAGTGGTCCAAACACCGCCCATAGCACCGGGAAGTACA
 ATAGATAAAACGTTGCTCGAAACCCCTAGATGGGACCTCCACTTGAATGGACCAAC
 CCCGTGCCCTAATTGTCCTTAACGTATGT

30

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 917>:

gnm_917

GGCTAGGGAGAGGGCGCAACCGTAGGTTTGTCTGAGCGGTATTTTCAACATACAGGCT
 GCTTTTCAATTGTTGAAACCGCACTTTAGCTTCGCAAGAACCCCGCTTCTCTCGGAA
 35 GCTCCGTTTTACAGCACTCCCTACTTTTCCCGCCGCAACGGGTTCTGCCTTTTTTAA
 CGCCGCTTCAACTGCTCGCCGCTTGATCAAACTGCGTCCGATGTTGCCTkTCATCAGC
 CGCAGACCGCGCTCGGGGGAGAACGGTTGTGACGTTTTCGCGAGGATGTGCTGCTTCGC
 CTGGTTTCGGGGGCTTCGCCATTTCGAGTTTCCCGTCGTTAAGGATGGCGGCGGTACGG
 TCGATGATGAAATCCAATCGGGTTTTCTCTTTGATGTATTCTGAAGGAAACAGGCTGC
 40 CCGTGCCCTGCGTTGCG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 918>:

GNMPO23TF gnm_918

5 ACTTCATGTTACGTTCAAAAATTTAATGCACTCAATATATTTTTTTAAGGAGAAGCAGGT
 GAGTCAAACCGATACGCAACGGGACGGACGATTTTACGCACAGTCGAATGGCTGGGCRAA
 TATGTTCCGCGATCCGGTTACGCTTTTATTTATTTTCATTGTGTTATTGCTGATTGCCTC
 10 TCCCGTCGGTGCCTATTTTCGGAATATCCGTCGCCGATCCGCGCCCTGTTGCTGCGAAAGG
 ACGTGCCGATGGGCGGCGCATGAAGCGGTGTGCGCCTTCGACGCCGCTGTCGCTCCATTC
 GAGGGAGCTGTTCCGGCGGTGCGGCGAACATCATAAACAGGCGGGCGGTGTCGCGCCGTA
 GCGCTTAATCAGTTCTTGGCGATCGACGCCGTTGTTTTGGGACTTGACATTTTTTCCGT
 GCGCGTGATGACGACGGGCGAGCCGTCGGCTTTGAAGACGGCGGAAATGGGCGGCGCTTT
 15 STCGTCGAACGTCAGCTCGACATCCGGGGGTTATCCAACTCTTTCGCCCTTTGTGC

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 919>:

gnm_919

15 GCGGGTTCGAAATTTGTGCTGAACCGGATTATCTGCTGGGAATTGCTTGCCTGTTTGA
 GCGTGGCGTATTTCTGGCGGTTGTCTGACGGTTTGGTGGGCGTGGCAAGGCTAAAT
 AAATCAATGCCGTCTGAAGGTTGACAGCGCATTTTATTGTATGTCGCTGCTCGCTGTA
 TCAGTCCAGATTCAATACGGCGAAGTGTAAACGCTTGCACGTCCTCAAAGTCTTCAG
 20 CGCGTCAATCAGTTTTTGCACTTTGACGGCATCGTCGCGGAGAGTTCGGTTTCGTTTTG
 GCGCGCATCGTAACGTCGCCGTCAACGGATTGTGAACCTCGCGCTCCAAAGCGGATTT
 TACGCCCGCCCAATCGTTTGGCGGTAATGACTTCGATGGAACCGTCGTCGTTGGTAAC
 CAGCTCTTCGCGACCGGCTTCCAAAGCCGCTTCATCAGCGCGTCTTCGTCAACCGCGG
 TTCGA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 920>:

GNMPP87TFB gnm_920

25 TATTCCTGACGATTGAGGTATTCCTGACGATTGAGGTATTCCTGACGATTGAGGTATTC
 TGACGATTGAGGTATTCCTGACGATTGAGGTATTCCTGACGATTGAGGTATTCCTGACG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 921>:

GNMPS93TF gum_921

30 CGAAATTTTCATGCTTCGGCTTCTTTGGTGAGCTTGACGAGAAATACCATCGCTGCCAA
 ACGGATTCCTTTGCTGTGTTCAAAATAACGGGGTGATTTTAAACGATTAAAGA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 922>:

GNMPS95TRB gnm_922

35 CACCTCCTCCACCGAAGAAAAAATGATCCGGGTGGAATGGGGTCGGCGGCTGGCCCC
 GTTAATAGTAGTCCGAATCGCTGTGGGTACTGGTGCGCCGCTGTACCGGGTCCACG
 GTGTAGGTGGGTGGCAAGGTGGCTAATGAGCGCTTCTAGGTGGTACTGGCCGGTGGCC
 40 ACTGTTGCCCTTATTACCACTAATTAGGTATTGACGGGTGGTGGTGGTACACCGCC
 CTTGGGCTGTGCGCGCTGTTGGTGCCATGCTGACGACCCCTACTTCCGAAGCGACCGCG
 GTGGTGACCTAGGATAAGTCGAATACGGGTGTGCTAATGTTATGTGCTCGCTCGCTGTAAC
 TTGACGGGTACCGCCCTATGTCGTCGCTGGCATGGTGTGTTGCTGCTGGCCCCGGAT

GCGACGGATAAACCTGCTAATATTCATGGGACCGCGTTGTTGGTCCCGCCACGCCGTT
GTTACTA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 923>:

5 **GNMPU24TR gnm_923**

GGATGGATAAAGGCAGCCGCCATTCTTAOCGGCTCTGTTTAAATACATTGCGGGATTGCT
GCCTGACTGCCTTAGCCCTTGCTTTGCGGGAACAAAGACCCGTAACCGCTATATATCA
AACGGTTTTACGGGTCTTTTTCTCTTGGCGTTTTCTTCAGTTTGCCGATCCGACACAG
CCACCGCCGATTCTTCAAACGGTTTCCCGCGTTCTTCCCACTTAACGAACATTAAAGTTC
10 TGCTACTGCTTTGAGCCCAATGTGAAACTTGGCGCCTGTCCGAATGTTGCTGCGCGCTT
TGCTGAACCTTCTGCCCTTGGCTTCTTCTTGTATGGGTAAACGACGAAGCCGTTTTTT
ACATAGTCTTGCACATCAAATCCGTCACTTCTTCACTGCCGT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 924>:

15 **GNMPU24TF gnm_924**

ACGCCGTATATTGACTGCATTAGGCTTGATGGCGTAACTATTACGGGGTGGATAGATT
GGTAGCCCATTTTCAGCAGCGGATAACCAATAGCATAACGGGCGCGCCTCAAGCGATGTT
GCAGTCTTTTATATAAGCGCGGTGGAATCTTCTTAATATCTGTTTGGCGCGATGCG
CTTTATTCTGTCAATCATACACCTGACAAACTAGCAACCTCAATCGGAAGAAAAATA
20 AATGTTAAAGATATGTTTGATAACCGGCACGCCCGGTTGAGGAAAAACATTATGAATGTT
TTCATGATGGCGAATGATGAAATGTTTAAAGCTGATGAAACGGCATACGCCGTAAAGT
ATTTACGAACATAAAAGGCTTGAGAAATACCGCACCTACATACAAACGACGACGAGAAAA
GCTGCCGATATCGACAGA

25 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 925>:

GNMPV25TF gnm_925

TTACAACACGGTTTCTTAGATTTTACGTTCTAGACACTAGTATGAATCCCTGCACCGCG
CAACATCGCATCTGCTAGATCCGCGCTCATACCACTAGCGGTTGCAACATCGTATC
TTCTGTTGAATACATTGCGCT

30

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 926>:

GNMPV30TF gnm_926

GCTTCGGCTTTTGGCGAGCGGTGTGGCATCGCGTTTTTAAAGATGCTCAATACTTGA
GTGGCGTTTTGACGGATTTGGCTTACCGGTCGGCAGGGGCGGCAATGCCATGCCGATG
35 CTCAAAATACCGATGCCCAATGCGCTGATGAGGAGGATTTTTTCATGATTAAAGTGCCT
AGTTTGAATATGATGGCATAAGTTTATCGCGCGCTTTTCCGCATTCCTTTGGCGTTGC
CGCGCGCTCGGCCCTTTTGGGGTAAGCGTCGGGTGTCCAATACCGCTCTCTTTGAGCC
CGAGCTCGGTTTGGCTACCATCCATGCGGGATAGCATAAACCGCGGCCCATCAGAAAAA
ACACCGCATCGATACCGTGCTCGTCGATCAGATGACACGCGAGGCCAGGTTGCCACA
40 ATACGCGCTCGCGGTTTTATGGCGGCCACGGTTATCGTGAGTGAATCCCTCCAGCC
GCCAGTCGCGCAGCTGCTTTTAGCTGCTTTTGCAATGCGG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 927>:

GNMPV42TF gnm_927

5 GTCTGTAATAAGCCCTCGAAAAATCAAATGCCGTCTGAACATTTCGCCGTTTCAGACGGCAT
TTTTCAAACCGGACTGACGCATCGGGAGCAACGCCCGCACCGGATAAAATTTCTGCCGCA
GACAGTTTCAGACGGCATTTCGCCCTGTACAATATAGTGGATTAAACAAAATTAGGACA
AGCGCGCGAGCCGACAGACAGTACAAATAGTACGGAAACCGATTCACTTGGTGCTTCAGCAC
CTTAGAGAAATCGTTCTCTTTGAGCTAAGGCGAGGCGAGCGCGTCCCTCGCAATATCCGTC
CGCCCGCGCTCGGCGGGCGGATACGCTGCGCTGCGCCAAAACGGGCGCGCTCGTTGATGCCG
10 TCGCCTATCATCAGCACTTTTTTCCCTTCTTTTGCAAGGCTTTGACGTTATCCAGTTTG
TCCTCGGGCAGTGGCTTGGGCGCGGTAATGCGC

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 928>:

GNMPV63TRC gnm_928

15 GGGTAGTGAGGCCCAAAAAAGTTTTGTTCATTTTGAATAGGCTGCCCTTGTAAGTTGGT
AAGGCTCCGACGATGAAAGATGACACCCCGGTAGGCTAGCTCGTACGGTAGATCATTGGT
GGCACGGGAAGCTGGCTTGACCCGGGCTATGGCGTACACTAGGCTTTGGATCGGATGGTG
GATCGGTCGTACTGCGAGCCGGCGCTGCGCCGAGCCGATTGTGTAATAGATCCATGGT
AAAAAACCTGATGAGGCCCTTTTTGAGGAATAAGTTGCTCCGAAAATATGTTCCGTTGAT
20 GAACATTGTAACTAAAGTTGTGCGAAGGAAGATGGTAGTGCTGCTACTAGTGACATGTGT
GGCAAGTTACTGAAAGTACTTCGTTCCATCATTATGGCGCGCATAGTGATGACTCAAG
CGTTAAATTATCTGTGAATATCCGTAACGAAAAATAACATACCGTTAAGTTAAGAAGTG
TGCGAAAAATCGCCTAATCCTCCTCGGATCCTCCGGCTCGCTCGTATTAATTGCTTC
GATGAGAACCCCATCCATATTAATAATCGGTTGTATGAATCCCGACTAATAATGCACTG
25 ATTATCGAA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 929>:

GNMPW59TF gnm_929

30 CCAACAGGTGCAAAATGGTATTGGTGCTGCCGCCATCGCAATATCCATCGTCATAGCGT
TTTCAAACGCTTTTTTGGTGGCAATGCTGCGCGTAACACGGTTTCATCGTTTTGCTCGT
AATAGCGTTTGGTGATTTCGACAATCATACGGCGGCTTCGAGGAACAATTTCTTTGCGGC
CGGCGTGGGTGCCAATACGAACCGTTGCCGGGAGGGAAAGGCCGAGTGCTTCGGTCA
GGCAGTTTCATCGAGTTTGGCGTAAACATACCCGAGCGTGTCGGCACGCTTGCCATGTTT
CTTATCGGCGGCGTACTGGTGCGCCACAACCTCGGCCCTCTGCAACGATTTCCTGCACGCG
35 CAACACTGGGACGCTGGCTGGGCGGAGTACTTCGCCAACTTCGTTGTCGGGCTGCTTTC
GGTTCGATTGCCTGCGCTTCGCCCTTGGCGCTGATGAATCGTTTCGGCAGGCATTGATTC
CTTTTTCATACCCGATGCCGTTTGAAAGATGTTTCAGACGGTATCTTCCGAACGACAGAC
ATG

40 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 930>:

GNMPW71TR gnm_930

CTACTAGATGAAACATAGAGGTAGAATTCATGACATCAGCATGGGCAATTATATTTTA
CACATGACCTAAAAGCACAGGCACAAAAGCAAAAATAGACA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 931>:

GNMPZ21TR gnm_931

5 GCTCGGTACACCAGGAATGGTCAGCAACTTCACAGAACTCCTAGTGCCACCTTCCTTTTT
GAACTTTTATGACTTCTGGACAGCGTCATGATGATTGTCAAGTGTCAACACAGTGGGA
AGTGTCTTTTTCACATCCCCTTTAAACCAATGCCACTGCGCTGCCATAATCTGCG
AGTAGGCTATGACTTTTGGCGTTCCTGGGGTGACAGTTTGCCTACATCGCGTCCGTC
10 ACAGGGTTTCTCCACCATCTCGCGGACTGCCGGCGGATTCGCGCGTCTCGACATTGCT
CTTTATTGCTACCGCCGATGCACAGCCTGCTACGGCATGCGCTATCTTGTGGGCAATGT
AGTCTTCGCTGAGATTAAAGTTTGATTTT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 932>:

GNMPZ44TR gnm_932

15 ATCGCCCGTCTCAATAACCAATAAGCCTTGTCTCTGATCGGACCACCATTGGAGATAAA
TGTGCTGCCGCTCCTTTTTCGGTGGTTTCGATGGAGAGATAAGTCGGTGAAGCTTCGGT
GCCGTCCGACAGTGGAGGCGATGCGGCGCTGTTTTCAATGCGGACTGACGAAGTCACAAG
CAATTGCTTGGCGCTTCGAGTGTGACGGCATTTTGACGCCCTACGCCCTTTTTCATTGGC
AGTCAGTGTGATGCTGTCGGCTACATAGCGCCAGTGGCGGAGTATCAAAGGCAATAGT
20 CGGTTTCGTACCGCTGCAGTACCTGCAGTGTATTCGCCGCTGGCGTAACTCTACTTTCTG
AGGACCGGTAGAAACCGCCAGGTTTTTACCCTGTAATTTCCCTGCGAGGCAACTGC

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 933>:

GNMQA27TRB gnm_933

25 CAACTCTGCGGATGGGCGAGGTAACATACTGTTGCCCTATTTAAAAATTTTGTGTGTTGTG
TGAGCAGCTATTGGCAACGGCGCTGTGTTTCGCTTTACTAGCCTGGCCATTAATAAATCT
TGCTTTTACCCTCCCTAGTAGGCTGACCGTGCCTTGCCTGCAACGGCTAAACATAGGCC
CGGTGTGTTGTTGGTGCCGTTTTCGGCTCGTACATTGAGCCGCTGTGTGTCGCAATCGTC
GAGGAAACAGTTCCTGATAACGTTGCCCGAACTATGAAGTGTGGCGTGGCGGTAATGTT
30 CCTTGTACTAAAACAGTCGTGCGGAAAGATGGGGGAGCGGTGGCCTCCTGTGTAGGCC
GAGGAAACTGGGTAGGATCCCGCTTTCAGCTGCGTGACTAGGAAATCGTCCCGGTGGCA
GAGTGTGTTGTTGGAGAGCGTGTGATGAGGCGCTTGACAAGATTGTTGAAATGCGCGC
ACTGAAGAGGATGGGCGAGTCGTTTCGCTGGGACGTCGTGGTCTGTGAGCTGGTGTAAAGC
CTGGTGGG

35 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 934>:

GNMQA92TF gnm_934

40 TTTTCGATGCTGCCTTCAACCGCGCGATAACACGGCTGGCGAGGAAGGCGGTGACAGGTT
TGACGGCGAGCCACATCCAGCGGTTTTTACCAGAAATCCACACGGGGGCGAACAGGTCCT
CCTCTTCTGCAAAACCGCCATATTACGATATCCGCTTCGATTCTTCGGCGATCAGT
CCACACAGCTCCTCCGGTAAAGTCGCGTATTTCGGTCTTTTGAAGCGAAATGGTAAGG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 935>:

GNMQB81TF gnm_935

TATTTTATCAGAATGCCGATGCTTGTCTGTTCAAATTAATTTCTTTCAAATAAATTA
 CTTATTTCGGATTTGCCGGGGCTTCGGATAAATTCCTTGCCAAGGTGCGGCATTGCCTGC
 ATAATTTCGCTTTCTTTGCCGGGATAGCTCAGTTGGTAGACACCTGACTTTGTAATCAATC
 5 AACAAATCCGGCGTTTCCACGTCATGTCCCGCAATATGGGTGGCAAAGTTGCCCGCGCTG
 TAGAGATGAAGCGGTCCGCGTAAAGTTCCACGGCGAGTAACGTGCGGCCCTCCGCCG
 AATACGACATCCGCGCCGGAATCGACGGCAAGCCGCGCAACCTCAACGACGTTGCCCGCTG
 TTTTCCCATAGAAGATTTCGGTATCGAACGGCAGGTGTTCCGCTGTTTCCTTCCGCG
 CCGCGTGGAACATCAC

10

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 936>:

gnm_936

CGAAAAAGAACGGGTAAACACAAAATAGGCCTGTATGCAGGCAAGGTTTATTGTGTT
 TGACCCCGAAACGGGTTTCAGACGGCAGAACCGGGATGCCGTGCCGTCTGAAAGGGGTTT
 15 ATCGGGTGGCGCGGTAATCTGCGTCCGCTTTTCAAAGCGTCTTGGGTTTCGCGCGAAG
 GTTCTTTGTTGAACAGGGAACCAACACGGCAACGATCAAGCAAAATTAAGCCCGGCA
 CGATTTTCGTACATCGTCAACAGCGCTTTCTCTGCGCTTGAGCCGGTTTTTTCAOCC
 ATTCGCCCATACGACTACGGTTAACGCACCTGCACCATACCCGCAACACGCGCGTAGG
 20 CAGTGATGCGTTTCCACAATACGGACAGAATCACAATCGGGCCGAATGCCCGCGCGAACC
 CTGCCCCACGCTAAGACACCAAGTCCCAATCTTTGCTGTTCGGATCGGAAGCATCAGGAT
 GGAATCAGCGCAATCGCCAAAGCATTACAGCGCGCGACCATACCAATTCGACTGATG
 CCGGTTAATACGCAAAAGTCTTTGTAGAGTCTTCGGTATCGCGCTGGAGCAAAACAA
 AA

25 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 937>:

gnm_937

GCTTGCCGCTATTCTTCTACGCGCAATTCGACGATTATATTTGGGCGGGCGCAGCCT
 AGGCCCGTTTGTTACCGCGATGTCGGCAGGCGCTCCGATATGTCGGCTGGCTTTTGAT
 30 GGGTCTGCCGGGCGGATTATTGAGCGGTTTGAATGAGGCTTGGAATGCCATCGGGCT
 CTTGGTCGCGCGCTATTCACTGGCTTTGGTGGCGGCGCTCTGCGCTACATACGGA
 ATACGCCAACAACGCGCTGACGCTGCCGGAATTATTTCTCCACCGCTTTGGCGCGGGCGG
 ACACCTGATGAAAGTGGTTTCGCACTGATTATCCTGTTTTCTTCAAGATTATTGCGC
 35 CTCGGGCATTGTGGCGGGCGCAACCTGTTCCAAAGCCTGTTGAAGGTATGACTTACAA
 TCAGGCAATGTGGCTGGGCGCGGGCGGACCATCGCTATACCTTCTTGGCGGGCTTTT
 GGCGGTAAGCTGGACGGATACGCTGAGGCTTCATGATGATTTTCGCGCTGATTTAAC
 GCCTGTATGCTATCTGSGCTTGGCGGCGCGGAACAGATGTCTGCGCGGA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 938>:

GNMQE49TF gnm_938

40 CCTAAGGCACATGTCATTATCCCCATTTCGATAGGTGAGGACACTGAGGTTTCAGGAGGGG
 AGACATCTTGCTCCTGGACACCTCAGCTGGGAGGAAGGCAGTGGCGATCATTTCTAGGA
 ATCTCCGACCGCATGGGCTCCTGCTCTGTGCACCTCAGGAGCTTACGCTCTGTTTACA
 ARAATGCCATCTGCCTATGCTGAATCTAGGCTTATGAAGATCCAAGACATATTCCTGAA
 AATCCATATTTTCATGCATTGTACTATCTT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 939>:

GNMQE84TF gnm_939

5 GAACATACCAATTGCAAAACATCAATAACTCAAAAAAGATTTCCTTTTATGATCAAGAAT
ATACCGAAGGTACCTAGTTGGCTTCGCCCGAGGTTTAGGGGTTGCAAAAAGAAATGGGG
AGCAGCTGTTACAACAGCCAGTTCGCGCGTATTTACGGCAGGTGTTAATAAATTCAT
GATATTTTCTTCAAAAAGTGTTCGCGGTAATGGATGGAGCGTTTTTCAGACGACCGCC
10 GAACATCCGAAATCAGTCTTTCAAAATCCGAATACGACAAATTCGTATTGGTTGCCGA
TTTCTTCCAAACCTCGCTTAATCGCTTCTTCGAAGTCGTAGAAATAATCGGCATTGGTGA
TTAATTTGGTATGTCGATGTCGCCCGTT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 940>:

GNMQF69TR gnm_940

15 CAGCATCATCGACAATAATGCTACAAGTGTGCAGGGTTTCGTTTTGTGCGGCGGTTTGGG
GCATTGCAATCATGGTCATTTTCCTGATTCTGCTGTGTTGCCGAATCGGGCGACCTGT
GTGAAGGTAAACAAAAGCCGCCCGTTTTTCGAGCGGCCTGTTTTCGTATGGGATGGAT
TTCAAGCAGCGCAAAAAGTACCGCACGTCTGTGTGTAACCAATAGCAATAACGGGTTG
TAAATTTTTTGCCTTGCAATGATGAATGCCGCTCGAAGATAAAAATATGGGGAGATTCT
20 AAATCAAAACGCTCGCCGCGCTCAAGCATTTTATCGAAATTTTTTGTGATTTTCATCAT
CCGATTGAAAATATTCGGTTATTTTACCGCTGCCCGATATTGTCGGCAAT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 941>:

GNMQH20TR gnm_941

25 CCGATTCCCGCCTGCGCGGGAATGACGAnCTCTCCGCATCTGATTTTGACCTCTTGAC
GCGATTGCTGCATTTTGAAGTGTCCACCAAGATAATCATAGTAAAAAATCGTCCATCA
CGTGTGGCTGATGTTGAGAATATTGATTTGGTTTTCCGCCAAAATTTGGAAACATCGT
ACACGATGCCGACGCGGTCTTTACCGATGACGGTGATGACTGAATTTGTCACAGGCTTAC
TCCTTCAGATATCGCTTTAAAGTCCGAAATTATACCAACGCTTGGATTTGAAGAAATATT
30 GTCAACAAATATATACATACAAAATGCCGCTCGAAACTATTTCAGACAGCATCAAGATTCA
GGGTTCCGATTAAATAACCATCTTATCCCACTGGGTTTTCTGACCAACTTGTCAATCCG
ATAAACAGCTTCGCTCTTTTTAGAACCATCTTCATACCACTCCAAACCCACCCCGTTGG
TTGATGTGGCGGATAGACAGTTCGAGAGTAATCGGCCGCTTTCATCCCAAGTCAGAA
TTTGGCAGGCTCATCGTTGACCATAACCATTTCCGCTTGTATACTGCCGTCCGCATACCA
35 TTGCTTTCATACGCCGTTTGCCCTATTTTGCTTAAACTGGATTTCGCTTTCCTTGCCGCC
GTTA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 942>:

GNMQL93TF gnm_942

40 CCTACAACCCGGCCGCAATTCCTCGCAGACTTGCTAAGTCGGATATTGAAAATCGAC
AGCCGAATTTACAGGGCCGCGTGGGACGAAGTTTGAAGGCTATGCCCGCTCGGCTT
CATCGTCAAGCCTTACGCGGATGCGCGCCTTACCTTTAAAAACGAACCTGGATTGCA
CTACAAATCCACAGTGAAGAAAAATGCCGCCCTTACCTGCGCCGCGGTTCAAGGCCCCCG
ACCGGCAAAACCTCGACCGCACCATCATCTTCGGACACTGGTCTCGTGGGGTACACGA

-890-

ATGCCGACAACGTCATCTCGCTGGACCCGGCGCGCGCAAATGCTTCCGAAACAGCTGT
TAAAAATATGCATTAGATATATTTTGGGATATTGGCAACCTCGTATGGGACGGCGGTAA
ATGGATTTCGCCAAATCTATTGGCGATAAGCAGATGGCTCGAGAAGCGCGGATTGATT
TGGTGTGGATGCCGCCGAGCTGCCGTTCCCTTTGTTCC

5

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 943>:

gnm_943

AGCGGGAAGGTTTAAATAGTTAGGACGCCGGTCCAGAAGTAGTTACTACCCAAAGAAAGT
GCAAACAGTCTATCGGCTGAGCTGCTTCGTGTGGAAGACGCAATGGGCTCTAACTCACA
10 TTGAAGTCGTGGACGTTGGCCCATTTGGTACGGCAGGGGAGTGCCCTCGAGGTCGACGAAG
GCGTACCGCAAAGCGCGTCGGAGGCACTAGAAGCGTGAAACCGGATACGAGCAGTGACAA
AGTGGGCGAAAAGTTTGCTGTTGAAAGTTTAAGGCCCTTCGTGTAAATGCCACTGCTGGTGC
AKGGCAGCTGGTTTTCAAGGTGAGGTAGAAACGTGCAGCTGACGGGAAATAGGCCAACA
CCTTCGATCCGACCTTAAACGTGACGCGGGATGGAGAAGGCCAGGCCGTAAGTCGCGG
15 GAACAGTCCGCCCAAGTTGGCAGGCGGAAGATCCAGGTAAACTTGGGCTCCTCCAAATATT
GGAAGCGATGATGAGCGCTCATGGATATGAAGTAATTGACATTATGCTCTAGGAAAAG
TTATCAAGTCCTAGCCGAACTGAATTGCATTGTATATTGATATAGCGGGTAGGACGAG
AAGCTCAAGGTGCCGAGAGAATCTAGG

20 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 944>:

GNMQM32TR gnm_944

CTATCCGAACCGCTGCCGCCCTCCAAGTAATCATTACCGCACCGCCGATCAGAGTGTGC
TTACCGTCTTCGCCGGCTGATGTGTACAAACCGTCTTTGCCCGGCATCAGCTGACAAT
CGCGCCGACATTTGATCGAGGATTTTACCACAGTGCCCTCGTACACTTTGGCCACTTC
25 CACTTCGGCAGTAATCTGCTCGATGCGTTTTTTGCCCGCATCGCGGCTTCTTGAGTGGT
TGCGGCAATGGTAATCTACCGTCTTCGGCAATATTGATTTCCGTACCGGTTTCAGCGGT
AATCGAAGCGATGGTTTCAACGCCCTTACCGATAACTTCGCGGATTTTGTCTTGGTTGAT
TTTCATCGTGAACAAGCGTGGCGCGTGTGCGGACAGCTCTTGGGGCCGCAACGGCGGC
TTTCATCTGATCCAAGATGTGCAGACGCGCTTCTTTGGCCTGTGCCAAGCGATTTCAT
30 AATTCTTTTGGTAATGCCTTGGATTTTGATGTCCATTGACGCGCGGTAAAGCCTTCGGT
CGTACCGGCGAGTTTAAAGTCCATATCGCCCAAGTGGTCTTCGTGCCCCAAATGTCACT
CAGGACGGCAAATTTGTGCCCTTCCAAATCAGACCCATCGC

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 945>:

GNMQN35R gnm_945

GCCTCGCCTTGCCGTACTATTTTGACTGTCTGCGGCTTCGTGCGCTTGTCCTGATTTTTG
TTAATCCACTATAAAAGAGGGGCTCTGAAAACATTTTCAGACGGGCTTGTTTATTTCAA
TCAAATTAGTCTTTCAACTTTGGCAACTGATTTTAACTTTTGCCATTTTGCCCTTCCAA
TCCGCCAAATCGGGTTTGCTTTTCCGCCAAATCCAGGGGGTTTTTC

40

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 946>:

GNMQN72TR gnm_946

AAACGTCCTACACATCCTTTTAGTGCAATTTTCGCTTAAATTTGTTAACTTGGTAGGGCC

-891-

CTTATCTTCGAAAAATTACCTCTTGTTAAATGTTGTGTTGTTGTTGTTTCCGACTGAAA
 TTGCGCCTTAGTAACAAAAAATGTTCCTTGTTAAATGGCTGGGTGTGTTCCGGTTAAG
 GCGTGGACGTAGTCCAGGTTGCTCGAAAAGCTGGCTAGTGTGACCCGTGGTCTAAATGT
 5 AAACCTGTTCCGTAATAAACGCCCACTGTTGCCCTGACACAGGGTGGGCCGGATATGACG
 ACGCTTTACCCCTTTCCTAGATGCTACACTGGCGCTGAATTATGAATTGCGCGTTAAACCTG
 ATTTGTGTGTTTAAACTTGTGTACCCCTTGTGTGTCCTAAGGGTGGGTGGGTGCGACG
 CTGGACGTGTATAAATGTACTGGGGTGCTGAGTGTGATGSCCATGGGAATTTGTGTG
 TCGTTTGCCTnTAAACTTTATATGTGTTTGCCCTGGGTAGTGTGTTAAACATGGTCTGT
 ATTAACGCCCTGGCCCTGGGGTGTGGAACTAGTATGTCTGGACC

10

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 947>:

GNMQ054TRB gnm_947

GGGTGCATGCTTAAGAAAAATTATTGTTACTAGTGTGATTAAAGATTAGGTGCAACCCGCTG
 ACGGGGGTGATCCCGTGAGGTGCCGTTTAGCCGTAGGGTCCCAAAACAGGTGAGTTAAGAC
 15 GTGTTGGCAGTAAGATTGGACAGGACGAGGAACGCTTAGCCGTGTTTGCNAAAGTTGCCT
 ATATTTTCGTTACCCGTTGGCGCAGGCCAAAAATAACAATAAAGTGGTAAGGACGATTAAAG
 GCGTGGACAAAGGCGGTGAAACTGGAACCTCACATTTCGCAATTTACCCCGGTGAAACAA
 GTGGCTAACGAGGTGAAGTTCGTTGACGTTAACGTTTAAAAATAGTTACGTGCGCTGCTTT
 20 ACGCCCTCTTCCGGACCGCGAATAACACGAATGGCACCCCGCGCTGCTGTAAAAACC
 CATATGTCGGGCCCGGCGTGGACAATGCCACAACAGTTCGACACACCCCTCAACTTATTC
 GCCCGCTGTTGACAGTCCCTAGATGGTACGCTTTCTTCAACCTCAAGGAAAGCTACGA
 GTCCCTAAAATTGACGTTGAAACTGTTAACTTCTTATTACGCTTTGACCGGTGAAACCC
 GTTGTTAAGTCCGGCTCGAA

25 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 948>:

GNMQP31TR gnm_948

GCTGTAAATGTTCAAACTACGCGCTCCAGATTTTGCGAGTTTTGGAGCTGTACGG
 CATGCCCATCCGTATCGGCAAACTACGGCGCGGGCGCAACCAAGAGGAAAAAACACCCCT
 30 GCTTCGAGCGGTGGCGGAAATCGGTGCGCGGCGGTGGGCGGTACAGGCTTTCGCGGTGTGC
 CAGCACGCTGGCGTTTCGCCCTAATTTTGGCGGCCCTGTTCCGAAACCTGAATCAGGCT
 GGAGCGTTTTTGGAAATCATATGTCCCCAAAGCGGAGGAAAAAGCGGCGGTTTCGGCTGTG
 GGGCAACACATGTTTGGACCGGCGCAGTAGTCGCCGAGGCTTTCGCGGTTGAGCGTCC
 CATGAAAAATCGCACCGCGTGGCGGATTTTTTTCGCCCATCTTCGCGGGTTTTCGACTGA
 35 CAGTTCCAGTGTTCGGGGGAAATGTAGTTGGCGATTTCGCAAGCTCTGTCCAAGCTCTT
 GGCGAGTATCATCGCGCCCTGTTGCCGAGCGAGGCTTCGATGAT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 949>:

GNMQP64TR gnm_949

ACAAGAAGCTGGTAGCTCCACCGCGGTGGCGGCCGCTCTAGAACTAGTGGATCCCCGGG
 40 CTGCAATGGAATGGCACGAGCTCGTGCCGAATTCGGCAGCAGCGACTGCATTGGGAAGATC
 ATGTTTTCTGCCATCCAGGCTGCTCCCTCCTCAGCACTCATTCACAGACTCTTCGGA
 GACAGGACGGATATCCAGTGCCTATCCCATGTGCCATTGACCGAGTCTTACTTTAGA
 ATGACAAGGGACGTCGCCCCAGGATCGGCTATCCTAAACCAGGCCCTGTGCACTCCAGC
 TTCAATCCAGCCCTG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 950>:

GNMQP64TF gnm_950

5 TGGGTACCCGGCCCCCCTCGAAGAAGAAGTCAAGTACATGAAAGACACGTCCACATCA
CAGTTGCCCCCAAACATGCTGTGCTCCTCGATGGTGTCTCCTCCAGAAACACGATGC
TTATTGACCTTGGTTTGTATCTGCTTGGCCGTGTCGGTAGGAAGATGGCCGAGTTGGGG
TCGCTGGGACTCATTTTGGTCTGGGCGACCTGCATGGCTGGGAAGAAGTGGAGTGCAAC
ACGGCTGGTTACGATACCCGATCCTGTGGGCGACGTGCTTGTCTAAAGTTAAGA
10 TCCTGGTCAATGGCACATGGGATAAGGCATGGATATCCGCTCTGTCGGGAAGATCTGT
GGGAATAGATTGCTGAATGATGGAGCATCCTGTATGG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 951>:

GNMQR24R gnm_951

15 CTTGCCCGCAAAACGTGGCGTGTGACCCGCTGTATACAACTACCCGTA AAAACCT
AGTGAGTTAGCATCATATTGCTGCCATTTTTCACGGTCTTCCCTAAATAAGCAGTAAAG
GCTTTTTCTCCCAACGGCAGGAGCTTGGCGATAAAATAGCGGAAPAGGCAGAAACACTT
TGATAACGTTCCCTGATTCGCGACGCGCAATACCAATGCGCGTGTCCGCCCATTTGAATGT
CCCATAAATGGAACGTTTGGCGTTGGTAGGAAAGTGTCTCAATCAGACGGGGTAGCTCG
20 TTCAAATGTAATCATACATTGATAATTGCGCCGCCAAGGCTGTTGCGTCGATTCAAA
TAAAGCCTGCACCTCTGTCTAAATCGTAAGCATCATCGTTCGGCACTTGCTCTCCGCGA
GGGCTCGTATCCGGGCCATCACAATTACTGATGTTCTGCCGCATACGCTGAAAGCTG
ACTTGGTAATGCAATTTTGTCCGTACACGTCAAGCGGAAAGCCAATAAATCACACCAA
CGCGTCGATTTCTGGATTATCT

25 The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 952>:

gnm_952

GGCTGAAATCATGCAGGACGGGTAAATCGCGCGCTTTGACGGCTTCTGCCCAAGCCACCA
AGGATTTCATCGGTGTCGCAACGCCGCCATACGTCATATTCGGAATCAGGCGCAGGGTAG
CGGTTTGCCTCAATCGGTGTATGGGTGCGGCCGTCTTGCCCAAAACCGATGGAAATCGTGGG
30 TAAACACAAATACAGGGTTGATTTTCATCAAC

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 953>:

GNMQU51TRB gnm_953

CTGTGGTGTGGGTGGGACGTTGTTCCCTTGGACCCAGAGGCAAAATGACCTGTTATCT
15 TGTTCGCCGTCCTGCTATCCGTTTATTAGATAAACGTGGGTAGTATGCTTTTGACGTCC
CCGTGCCCTGTCCCGGTCTGTTTGGACGGGACCCGACGTGCGGTGGGGAACCCAGCGGG
TTGGGGATGAGGATGCGGTGTGTAGGCCGTGGAAGTGCTTTACCTGCTGGTGTTGATC
CCGTATAGGCAGCCTAATGTGGTCCCGGATGTGTGAAGTTGTTTATAGCAGTCCCGGGC
GCCCTGTTGCGGTCCCTGTTGATGAAGACGATGGATGTGCTGGGTGATGTCCTAGTAGT
40 GGGAAATAGGGTGTGGGCTAGTTTACAGGCGTGATGGGCCGACGTGGGACCGCCGATG
TACCTGGTGATGGCCCGGAAACTTAGTGGTGAGAGGGTGCAAAAACAGTTGGTGATAGCG
ATGACGTTGCTTAGCCCGTTTCGTGCGGTCTGTTAAGCGCGGTGGTGAACCGCTTAAC
CTCCCCCTCCTTGTGTCAACAGGCTAAAGTAGACGGTGAACGGCCTGGGGCACTTGGTC

CTGATAACTGTGCTACATATCCCC

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 954>:

GNMQU68TRB gnm_954

5 TTTGATAAGGAACCCGTGTCATTCCAGGATTGCCACAGCCATGGTTGTTGCCCATCGGGGT
CCTGACTTGACGTCTCTATACTCCTAACCAATTCCTTAGTATTGGGTAGGTGCTATATTT
CACATGCTTTATCCCTGCGCCAGTAGAGCGTCGCGCCCCAACAAATAGCTGTAGTTATTC
ACCTCTCGTGATTCTTTGGGGTCCATGGAGTAAGCTTCCAATTCAGAGGGTACATTCCCT
10 CTTTGAAGCCATGGCACTAACCCGTTGAGCCTTCCTCTCGAGCCTCTCAAGTGTTCAC
GAACCTCTACTTCGTTTATTCGCGCTGGCCCGTGGCATGGCCTGACCTAAATCGAAGTCC
AGCGCTCCCTTCGGAAGTGGGCACTGGCCGCTCCTGCGCTTGAGATATCTGCTGCTAT
CCTCTGGCGCCAGAAGATTGGACCCGTTCAAGCTCCTTATTCATTGGTCCAAATTAAGT
CACCTTAATAGTCGGTTAATTCATTCTCTTGTCTTTTATACTGTACCCGAACTAAGCAT
15 AGGAACACCAATTCGCCCTTACTGATCATGTACCTCGTTCTGTTCCAGGGGTTGATCTA
TTTCATGTTGACGAA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 955>:

GNMQU88TRB gnm_955

CGTGTGTGTGCTGGCTTGACCTCGTTGGAATATAAGTTGTACCATTCGACGGGTGCAGGTA
20 TGTGTGAAGATTCTGCGCATGGTGGCGTATATGGTACTGACACGCCGTGATCGTGACAGT
TTATTTGTAACGTATGTAATGGTCGGTCGCCCATTTGCCCTGGTGACCCGAAACATAAAA
ATGTTAAATATAAGTCTGATAAGTGCTTGACAGATGAAAGTCGTATTCGTATGTTTCGTT
AAAATCCTAGTTGTGTTTCATTGCTATTACTCGTATTGATTTGGTGAACCTCCGGGTGAT
AGCGGAATATTACTTATAACTCGTACCCTCATTAACTACCAAGTGGAAACGTGTGAAG
25 TTGCTGAAATAAGTTAAACCCGTTGATCGGTAGTGTGACCTTATGAAAATTGTGTATGTG
GTATAGATCGACCTTTGTAACGTTGCTCGAAGTTGTCTAGATGTTACCCCGTTGTCCT
ATTTCAATTTGATCACCCCTAGAAAATGACTACGTCCTTACCTCCCTTAGAATTTCTTT
CCCTTCACATGTAATAAAATTGCATTGTTGCCCCGTCGCCGAATCTGSTATGTTTGTATG
TGTGTATTG

30

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 956>:

GNMQX55TF gnm_956

AGGATCCCCACGAACAAAAATGACCGTACAGACCAAGACAAAAGGTTTGGCGTGGCAAG
AAAAACCGCTATCCGACAACGACGCTGAAAACCGAAAGCAATTTTACGCGGCACGA
35 TTTTGGACGATTGAAAGACCCGCTCACGGGCGGCTTCAAAGCGACAACTTCCAATCA
TCCGCTTCACGGTATGTATGAGCAGGACGACCGGACATCCGCGCCGAACGCGCGAGG
CAAAACTCGAGCCCTTGAAATTTATGCTTTTGGCGTGCCGGCTGCCGGGCGGGATCATCA
AACCGTCCCAATGGATGAACTGGACAAATTTGCCGGGAAAAACAGTCAITACCGCTCCA
TCCGCTGACCAACCGGCAAACTTCCAATTTACGCGGTTGCCGAAAGCCAAAGTTGCAGA
40 CGATGCAACGCCCTCTGCACAACTGGGTT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 957>:

GNMQY03TR gnm_957

CCTACTCTCCCTAAGCAACGAGATGAAACAGCGTATCGACTCCCTGCCGGTTGAATTTTC
CGAAAAAACGCGACGTAAACAGCATCAACATATATAAGAACAGCACAACTAGCATCAATA
CATCAGGCAACGAAAAATGCAGAATAATGCACCTTAATGGTGTGTGGATATCTGTTGTTTTG
TGCTGTTAGTAATTATCTCTTCTGTGTTTACAGTTTAGCAGTTGTACAGTTTTATAGTAA
TGTTTAAACAATGACTGATTTATTTTAAATGCAGATATTGTCGAGGATAAACATGGCCAA
AGCCCTTTTCAGTAAACATTTCTGATTTTTTAGCGAGCCTTCTCATTTCCCGCAGGATAG
GTACTGGTACCTGTACTTTGGCCGCCGATATGCTTAAGTTCAAGTAACCTTAGCGCGCAA
TCCAGTAACCTTACGTTACGT

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 958>:

GNMRB37TF gnm_958

CACCAACCTATGTGTCGTCTGATCTGGGAGGAGTTGCCCTCCCAACAAATCTGATTTC
TACCGCCCCGAAGAGCGGGGTTTCAACCGACAAGGAAGATTGATGAACAATATGTTTGCC
GCAAAATTTGCCAAACTGGTTTATACCGCTTCCGACCATCCTGATTCCTGTGCGAGATG
GAGGAGTTTGACCGCCTGATTCTGCTGATACGCAAACTGTATCAAAATATTGGACGGGCAA
CATATCTCTCCAGAGTAACGGTTTGCCCTTACCACCACAAACCGCGCGAGCTGATTGCC
TTGGATAAAGCGGCTGCCGGTTGCGATTTCGGCAATGTTGCGCGCCCAACGTTGGCTCGGA
GCACATGGTCGCCGCCATAAATTGCGCGGGGTAGTGCCTTTAAGCCATGCGGCTCTGGTA
GGAAATCAGGGCGTAnGCGGCGCGCTGGGATTGTTGAAACCGTAGCCGGCGAAATTTTTTC
CATGTAGTTGAAGATTTTCGTGCGGATTTTTCGCGCGGAAATGCCTTGTTTTCGCCGCGCTTC
GGCGAAGATTTGCGGGTGTTCACCATTTCTTCGGGTTTTCTTACCCATGCCGCGCAGC
CAGCAGGTCCGCGCCCGCGCAACGAGTAACCGCGGATAATTTGCGCGCGCTCGCA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 959>:

GNMRF35TRB gnm_959

TATCGCATTTGTAARATAGTAAACAAGTAAAGTTTGGCGGTGGAACCGCAGATGTGTC
AGTCTTAGCGCTCAGCACCTCTATGGCGCGCAAGCCTGAGCTCCTCTTTGGGTATTATAA
CTAAACGTCCCGTCCCACCTTAACACCCAGACCGTTTGGGCGGTGGACCGGCAGATGTG
TTAGTCTTAGGGCTCGGCACCTCTACGGGCGCGGAAGCCTGAGCTCCTCTTTGGGTATTA
AACACAAACCACTTTGACCGGGACAACCTTTGTTACAGAGAGCGCGACGAGCGGCCCA
AGCTGTATGTTGCGAAGGTGCGCACATGCGAACAAGTGCACTGAGGGCCTGAACTTTCCCT
TCTCGTTAAACATAAACTTTAAATCCCCATGGCCCGGACCCCCACCACTAAATAAC
AACCCTACCGGGAAAAATTGGCAACCGCTCACAACCTGCTACTAATTGTCATTAATCACTTG
CCATTGCCCCCGCGGCACGCCCGGTGGCACGCCCAATTTCTCCTTAGTTCGCAAGGA
TCTAAAGGTGCACCTTCCATAATGGTACCGCCTGATAGTCGTTGGGAAGTTGAATTTG
ACATTTGAATGTATGGGTGACACATTTGTCGGAACCAACGGTGG

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 960>:

GNMRH76TR gnm_960

CATGTTGGTGTTCATTACAGCCCTTTCTCCCAAGAAATGGTAAGGACGACAGGCAACGGA
CGGTAAACCGAAGAGCTTTGAAGAGTTCGTTCACCTCAATCGAATCCGCCCCCGTTTTCAC
ACCCAACCTGTCTGCCGAATAGATGTAGCCGTGCGCGCGCAGCTTTTCCAAAGCTCG
CCCAACTCGTCGTAGCCCATATTGATATGCCGCTGAACTCCTGAACAGGCAAGGCTTGG
CCTTCTTTTTCGCGCGCATCCAGAGCAGCAGGATTTTCAACAGCTGCTCAACCGCTCG
CGCGAGTCGAAGCCCTTCGGAACGCTTCTCCTGCCAGTAGGAGAGTGAAGAGTCAGC

CGCGAGTCGAAGCCCCTGCGGAACGCTTCTCCCTGCCAGTAGGAGAGTGAAGAAGTCAGC
ACCGCGCCGCCAAGACCAGCGTCCA

The following partial DNA sequence was identified in *N. meningitidis* <SEQ ID 961>:

5 **GNMRI44TR gnm_961**

TAAGGCAAAAACAAGCGTTTTTCGTCAATTTGAGGCGTGTGGATTATTCCTTAGGTATTTT
CGGGCCGGAGACCAACGAGGTGGCGGGTGTGTCGTTACGTCCGGAGACCAAATAACTT
TGCACAGGATGTTGGTTTCGGCGGTCAAAAAAGTAGCGTCTTAATGTTTTCCATTTAAA
CAAAATGTCGGTGAGGATGCGGTTGTTTAAAACGATTTGCATGGCGTTGTGCAGTTGCAGC
10 AGGTAACGGTCGGGGCGCGGAGTCCGATGAGGACGCGTTCGGCGGTGGGGTGGATGCGG
AAGCGGTGCATCAGTGC GTTTGTTTTGGAGCCGCCGTTCAATTTCCAGTTGCCGATG
ACCCATTTTTTGATCCACATTCCGATTTGGCGATACATCTTTTTTGCTCCGTGTCGTGTT
TTTTTGCTGCGCGTGTGGCGCGTGCAACGTGAAGTTTAGTGGATATGCGGCGGGTTC
GCAACTTGAAGCGGCCGGCCGGCGGTTTGGAAATGTTGTTTCGGGCAGGCTGTTTTATAA
15 TGGCCGCTGATATGTATGCAACTATAGGAGATGTGATGCACGCGCTTCATTTTTCGGCT
TCGGACAAGCCGCGCTTTATCGGGAGGTGTTGCCGAGATTGAGTCTGTGGTGGCTGA